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ABSTRACT

This manual describes the establishment and operation of a Computerphobia Reduction Program on a university campus which is directed by a licensed psychologist who trains and supervises graduate student interns to deliver three brief skills-acquisition modules. The manual describes the clinic facility, including staffing requirements; general clinical information, including a description of forms, record keeping, treatment assignment, and supervision; assessment procedures; treatment descriptions; intern training; outreach strategies and development of a referral system; and program evaluation. It is noted that the manual can be used to establish similar programs at any academic site as well as to implement treatment programs in existing clinics or to assist practicing therapists. It can also be used in graduate student training programs to clarify the use of behavioral treatments. The appendixes include copies of consent forms, a variety of instruments used for measuring computerphobia, guidelines for treatment program staff, follow-up questionnaires, and outreach materials. (7 references) (GL)

COMPUTERPHOBIA REDUCTION PROGRAM:

CLINICAL RESOURCE MANUAL

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CHAPTER 1

INTRODUCTION

This manual describes in detail the establishment and operation of a Computerphobia Reduction Program on a university campus. The Computerphobia Reduction Program is directed by a licensed Psychologist who trains and supervises graduate-student interns to deliver three brief skills-acquisition modules. This manual describes the clinic facility, including staffing requirements; general clinical information, including a description and use of the forms, record keeping, treatment assignment and supervision; assessment procedures; treatment descriptions; intern training; outreach strategies; and program evaluation.

This manual can be used to establish a Computerphobia Reduction Program (graduate-student internship and treatment program) at any academic site. It can also be used to implement the treatment programs in an existing clinic, or by therapists in an existing practice. Additionally, this manual can be used in graduate training programs to clarify the use of behavioral treatments in a detail rarely offered in traditional texts.

The Computerphobia Reduction Program was funded from August 1985 through August 1988 by the U.S. Department of Education's Fund for the Improvement of Postsecondary Education. Initial research on the computerphobia assessment procedures was supported by grants from

California State University, Dominguez Hills (1983-1988). Further information concerning the results of this earlier research can be found in Rosen, Sears, and Weil (1987).

Four stylistic notes need to be stated at the beginning of this manual. First, for clarity and consistency, female pronoun referents will be used throughout this manual. Second, in our program, the Clinical Director, a licensed Psychologist, supervised all graduate-student interns. These titles will be used interchangeably throughout this manual. Third, this manual is intended to provide both a description and summary of our program as well as guidelines for establishing a Computerphobia Reduction Program. Lastly, since the majority of our clients were students the words client, participant and student are used interchangeably throughout this manual.

Additionally, the level of detailed data collection described in this manual may not be necessary or desirable in certain settings. Our research design and program evaluation needs required extensive data collection and analysis to evaluate the effectiveness of the program. A preliminary evaluation is described in Weil, Rosen and Sears (1987). Future publications will describe the final program evaluation.

CHAPTER 2

CLINIC FACILITY

Office Layout

The ideal facility for a Computerphobia Reduction Program will include a waiting room, a group room, several pairs of treatment rooms with one-way mirrors in between, or treatment rooms with video cameras installed and, for security reasons, an office for staff only.

The group room should be furnished with comfortable couches and chairs and should easily accomodate 9 people. The group room should house the computer, as well as an easel and pad of paper or a blackboard.

Ideally, individual treatment rooms will either be connected in pairs with one-way mirrors and equipped with microphones to facilitate videotaping of sessions, or outfitted with a central videotape system that includes cameras in each treatment room. A chair and sofa are the minimal requirement for each individual treatment room.

The office will contain file cabinets, desks for staff, supply cupboards, and will store the video equipment when it is not being used. This office should be locked when unoccupied.

Necessary Equipment and Supplies

Necessary equipment includes a computer with a printer, as well as the program "Print Shop" for completing the graduation certificate. (Note: The Computerphobia Reduction

Program has adopted Print Shop as its vehicle for creating graduation certificates. However, any user-friendly program or any personal computer will serve the same purpose.) In addition to computer equipment, a video camera and a VCR with a monitor are required for videotaping individual and group sessions, for supervision.

A telephone with an answering machine is needed to facilitate communication with clients and to take messages when interns are in session and cannot answer the phone immediately. Also in the office, tables or desks are needed for interns, as well as a file cabinet and storage cabinets. A chalk or grease-board is helpful for illustrating training and clinical issues during supervision.

Necessary supplies include colored pens/pencils and paper for group activities; file folders, fasteners, notepads and forms for client files; pens, pencils, 3x5 index cards, scissors, stapler, paper clips and tape for general office use.

Staffing Requirements

Staff members include student interns and a clinical supervisor. Interns can be master's level students of psychology or marriage and family counseling or post-master's degree students collecting supervised hours toward licensing. Interns should be available for 10-15 hours a week and collectively their schedules should overlap to allow office coverage throughout the week, especially

during peak hours for students on campus. Interns should have equivalent time slots available on Mondays and Wednesdays or Tuesdays and Thursdays to allow for scheduling individual clients at or near the same time on the days they take classes. (Note: This may vary at different universities or community colleges.)

Interns' responsibilities include: delivering both individual and group treatments, setting up and maintaining files on clients, answering questions about the program to phone callers and walk-ins, administering in-class and in-house assessments and scoring these assessments, involvement in campus-wide PR regarding the program, attending weekly individual and group supervision meetings, attending staff meetings, and additional duties as needed.

The supervisor needs to be a licensed Psychologist with experience supervising clinical work and well-versed in the theory and application of the clinical treatments provided. The supervisor should also be familiar with the use of video equipment to view and critique the interns sessions with clients.

Depending on the clinical supervisor's time, either she or an administrative assistant needs to be responsible for the day-to-day operations of the office. This includes: being available to walk-ins and callers to answer questions and explain the program; arranging office coverage with the interns; assigning clients to interns; reviewing files for

completion and accuracy; replacing office supplies periodically; keeping campus posters and flyers current; problem-solving day-to-day issues with the interns; facilitating communication between the administration and the interns; and making contact with faculty for in-class screening and feedback.

CHAPTER 3

GENERAL CLINICAL INFORMATION

Description And Use Of Forms

In-Class Screening Packet

The in-class screening packet contains a Computer Anxiety Rating Scale (CARS) and a Computer Thoughts Survey (CTS), as well as the In-Class Consent for Assessment Form (see Appendix A for consent form; see Chapter for CARS and CTS information). This consent form is unique and specifically geared for in-class testing; it includes a statement that results will not be given to the instructor but will be kept confidential. These packets are used to assess entire classes, upon request by the instructor, at the beginning of each school term.

Computer Comfort Profile

The Computer Comfort Profile is given to each individual who completes an in-class screening packet or a full assessment in the office (see Appendix B). This is either handed back in class or given to the individual at the office once her assessment materials are scored. The results of the person's CTS and CARS scores are shown according to her ranges (positive to extremely negative and non-anxious to extremely anxious) and an interpretive description is shown on the profile.

While CARS and CTS assessments are given numerical scores, these numbers are not given to the client. Instead,

the range in which the number falls is indicated to the individual in the shape of a thermometer, filled in with red ink to indicate how "at risk" the person is for computerphobia.

Consent for Computerphobia Assessment

When an individual comes to the office to either complete the assessment (initiated in class) or take the full assessment, each individual signs the Consent for Computerphobia Assessment form in the office (see Appendix C). The client is provided with a copy of the consent form for assessment for her future reference.

Confidential Intake Form For Computerphobia Program

This form is given to every person completing the assessment process in the office (see Appendix D). This form provides information such as the client's address, phone numbers and schedule to facilitate contact during the period of treatment, as well as for post-treatment follow-up.

Client Contact and Follow-Through Form

The Client Contact and Follow-Through Form (see Appendix E) form is completed for every individual who telephones, walks into the office to inquire about the Computerphobia Reduction Program, or wishes to be assessed and potentially enter the program. This form is to be used as a guide to ensure the intern covers all pertinent information. This form also tracks each potential client

from intake through treatment assignment, thus allowing a quick reference to her stage in the process. The intern dates and initials each item as it is covered with the potential client, and as the file is set up, etc. The following areas are covered on the form.

Upon contact, the intern asks how the individual heard about the program and gives a full description of the program. During this initial contact, the intern explains the time commitments involved and the types of programs that are available (individual and group). In addition, the intern gives disclosures regarding psychology graduate students doing treatment with supervision by a licensed Psychologist and regarding videotaping of sessions. Also, at this time, the intern clarifies any misconceptions about the nature of the program (e.g., it is not a class to learn how to use computers.)

After this introduction to the program, the intern sets up an appointment to complete the assessment process (or for full assessment if the individual has not already completed an in-class screening packet) or notes if there is no further interest at this time. Complete testing procedures are explained in Chapter 4.

When the client comes in for the assessment appointment, the intern opens a file for that individual and follows the checklist on the second page of the Client Contact and Follow-Through Form. This involves having the

client sign the Consent for Computerphobia Assessment form and complete the Confidential Intake Form for Computerphobia Program and pretests. The intern initials and dates the checklist as each step is completed.

After the client finishes the assessment procedure, the intern scores each test and places it in the person's file. The intern then gives the file to the Clinical Director to determine the treatment assignment and intern assignment.

The file is then returned to the assigned intern who contacts the client to set up an initial appointment, to discuss any waiting period, or to give feedback if the program may not be of benefit to the person.

Consent for Computerphobia Reduction Program

Each client must sign this consent form for treatment at the beginning of the initial treatment session (see Appendix F). The intern should meet with the client, offering her the consent form and then allowing the client a few minutes to read and sign it. The intern should answer any questions regarding the form. The client keeps the front page for future reference and the signed portion (second page) is placed in the individual's file.

Post-Treatment Questionnaire

The Post-Treatment Questionnaire (Appendix G) is part of the post-assessment materials and is given, along with the CARS, CTS and Attitudes Toward Computers Scale (ATCS), when the client completes the program (see Chapter 4 for

ATCS information). This is administered after all treatment sessions are completed and the client has completed her graduation certificate.

Computerphobia Program Completion Form

This completion form (see Appendix H) is given to the individual or group participant. This form is signed by the Clinical Director after all sessions, graduation certificate and post-treatment assessment have been completed. The student gives the completion form to her instructor as verification of participation in the program.

Computerphobia Office Termination Summary

The intern completes a termination summary (see Appendix I) for every client who has participated in the program. This form summarizes the type, dates, and details of treatment, including a description of treatment process and client's condition at termination. This form is filled out after every termination, whether premature or after treatment is completed.

Computerphobia Data Summary

The Computerphobia Data Summary form (see Appendix J) is used to summarize assessment dates and scores for pretests, posttests and follow-up evaluations.

Computerphobia Reduction Program ("What's Up?")

The "What's Up?" letter (see Appendix K) is sent by mail to an individual that an intern has been unable to contact by phone. This letter lets the client know the

Computerphobia Reduction Program has attempted to contact her and puts the initiative for further communication with the client.

Final Checklist

The Final Checklist (Appendix L) is used by the intern to double-check the contents of each file. This is helpful to ensure the completeness of information and similarity of order in each file, as it is closed after termination. After the intern completes the checklist she signs and dates the bottom of the form.

Record Keeping

Once a client completes the full assessment a file is opened to contain all her materials. The previous section describes all forms to be included in the file and their use. The order of their placement is indicated in Appendix L. Process notes and supervisor notes are also placed in the file as shown in Appendix L.

The supervisor should note and date comments regarding the intern's issues or the client's issues on the process note sheets following the last dated intern entry. This allows both the intern and the supervisor to reacquaint herselves with the issues discussed regarding that client.

Every contact between an intern and the client should be documented in the process notes. This includes treatment sessions, interactions in the office, phone calls and any

letters sent. For treatment sessions, process notes are to be recorded as follows:

Individual Sessions

Enter the date and time of the session, and label the session (e.g., "Session #1"). Make a statement about how the client seemed, noting affect, attitude, appearance, and whether she arrived on time.

Next, describe the work accomplished in the session. This includes listing self-statements created or scenes you worked on, with typical SUDS levels. Also note any problems such as the client not doing homework or difficulty with the relaxation or visualization procedures.

Describe any homework given for the next session. Finally, make a statement about what you will do in the next session, To Do Next, or "TDN". For more detail see the outline in Chapter 6.

Group Sessions

For group sessions, also enter the date and time of the session, labelling the group session number. Record information about the client's attendance, including early or late arrival, cancellation or no-show. Note how the client seemed, including observations about affect and appearance. Also, make a statement about the client's participation level in group, including interactions with other group members. Finally, address any problems encountered, and any issues you may want to raise the

following week with the client. For more detail see the outline in Chapter 6.

Treatment Assignment

Treatment assignment is based mainly on the pretest CARS and CTS scores as well as the self-report items on the pretreatment questionnaire (Confidential Intake Form for Computerphobia Assessment - see Appendix C). Typically, if a person tests "at-risk" on either the CARS or CTS she is offered an individual treatment based on the higher "at-risk" score. High CARS scorers are offered Systematic Desensitization (SD), and high CTS scorers are offered Thought Stopping/Covert Assertion (TS/CA). Typically, the self-report items corroborate the general clinical pattern suggested by the assessment. Of importance to note is what the client states she hopes to gain from the program (see Appendix C). This offers an opportunity to clarify any misconceptions she might have regarding the program's purpose (i.e., "I want to learn to use computers").

Students who score nonanxious in both categories, nonanxious in one and slightly anxious in the other, or only slightly anxious in both are offered the Information/Support Group. (Note: all students offered individual treatment are offered group treatment as well. If time constraints only permit them to do one, we suggest they follow through with individual treatment and participate in group at a later time.)

The few times that high scores are equivalent and self-report information does not clarify which area is most troublesome for the student, the treatment of choice is not determined until the intake interview is completed. Here the intern will need to ascertain through interview skills which treatment is best suited to the client. Any confusion not clarified in the intake interview as to which treatment is best should be discussed with the supervisor.

Supervision

Both individual and group supervision are necessary to the well-run program. We have the interns videotape their individual and group sessions to allow for the highest quality supervisory feedback.

Individual supervision sessions are held weekly and cover the interns' entire caseloads, focusing on any difficulties they are experiencing with any aspect of service delivery or a client's personality or within themselves. Videotapes of sessions are viewed to problem-solve difficulties and give specific feedback as to how the interns can improve their clinical skills, as well as reinforce what is working well.

Weekly group supervision sessions serve two purposes. They unite the staff at least once a week to deal with common procedural issues, as well as offer a vehicle to work out any interpersonal problems among the staff. Secondarily, each week one intern presents a formal case

presentation of a client and then the staff views a recent videotape of a session with at client. The tape is used to illustrate issues common to all interns, as well as to give specific feedback to the intern presenting. This promotes strong group affiliation among the interns and improves the "team" approach.

CHAPTER 4

TESTING PROCEDURES: ADMINISTRATION AND SCORING

Potential participants are given an assessment battery, either: (1) in a class or (2) in the Computerphobia Reduction Program office. The following describes the procedures. Information regarding development of a referral system is found in Chapter 7.

In-Class Screening

This assessment consists of a Computer Anxiety Rating Scale (CARS), a Computer Thoughts Survey (CTS) and the In-Class Consent for Assessment Form. It is given to an entire class of students during the first week of the class. The class is chosen because it will include some aspect of computer work during the course. Immediate feedback is given to the students by an intern returning to the class within the week and handing out a Computer Comfort Profile to all students. This indicates their level of risk for computerphobia and informs them about the Computerphobia Reduction Program and invites them to participate in our services. Students who are interested in further information or wish to gain assistance are asked to come to the office to complete the assessment process.

Pretest Administration

The Consent For Computerphobia Assessment form must be signed before administering pretests. There are two different consent for assessment forms; one is attached to

the in-class screening packets, and one is given in the office before any assessment is initiated (either completing in-class screening or giving the entire battery). The following details the assessment procedures.

Student Has Had In-Class Screening

When a student has taken an in-class screening (including an In-Class Consent for Assessment Form, a CARS, and a CTS), give her the following when she comes into the office:

-- Consent Form for Computerphobia Assessment (client keeps a copy)
-- Confidential Intake Form For Computerphobia Program
-- Attitudes Toward Computers Scale (ATCS)

Student Has No In-Class Screening

When a client comes into the office for a full assessment (i.e., not prescreened in class), give her the following:

-- Consent Form for Computerphobia Assessment (client keeps a copy)
-- Confidential Intake Form For Computerphobia Program
-- CARS
-- CTS
-- ATCS

From Previous Semester

When a student comes in who has taken either an in-class screening or full assessment during a previous semester, administer a full in-office assessment again (see above). This applies whether the student has completed one treatment (i.e., group or individual) and is returning for another, or whether she has not received any treatment.

Test Scoring Instructions and Clinical Ranges

After scoring each measure, mark the score and range on top right of each scored test. Follow the instructions below for each measure. Next, fill out the Computer Comfort Profile to return it to the student, either in class or in the office.

Individual Measures

Computer Anxiety Rating Scale (CARS). The items are rated as follows: 1=not at all; 2=a little; 3=a fair amount; 4=much; 5=very much. Omit the last question (Question 54); score any blanks a 2. The CARS anxiety categories are as follows:

Non-Anxious	53-109
Slightly Anxious	110-129
Moderately Anxious	130-149
Highly Anxious	150+

Computer Thoughts Survey (CTS). The items are rated as follows: 1=not at all; 2=a little; 3=a fair amount; 4=often; 5=very often. Reverse score items 1, 2, 4, 7, 8, 9, 11, 12, 15, 16, 18, 21, 22, 24, 25, 27. Score any blanks a 3. The CTS cognitions categories are as follows:

Positive	96.5-140
Slightly Negative	85.5-96.5
Moderately Negative	79.5-85.5
Extremely Negative	28.0-79.5

Attitudes Toward Computers Scale (ATCS). The items are rated as follows: 1=strongly agree; 2=agree; 3=neutral; 4=disagree; 5=strongly disagree. Reverse score items 1, 5, 7, 8, 10, 11, 12, 14, 23. Omit #15; score any blanks a 3. The ATCS attitudes categories are as follows:

Normal	Above 80
Negative Attitude	70-79
Extremely Negative Attitude	69 or less

Complete assessment procedures and instruments are described in: Rosen, L.D., Sears, D.C., and Weil, M.M. (1987). **Computerphobia Measurement. A Manual for Administration and Scoring of Three Instruments: Computer Anxiety Rating Scale (CARS), Attitudes Toward Computers Scale (ATCS) and Computer Thoughts Survey (CTS).** The manual is available from the authors at California State University, Dominguez Hills, Psychology Department, 1000 E. Victoria, Carson, CA, 90747.

Posttest Administration

Posttests always include the following forms:

-- Post-Treatment Questionnaire

-- CARS

-- CTS

-- ATCS

Individual Treatment Only or Group Treatment Only

Posttests are given to a client after the graduation certificate is completed in either individual or group treatment. Skills have been reviewed and summarized in the last session; then the intern makes an individual appointment with the client to complete the graduation certificate, after which the client takes the posttests.

Individual and Group Treatments Overlapping (See Appendix M)

When a client is participating in both individual and group at the same time, the graduation certificate and posttests are completed after the final session of the treatment which ends at the latest date and time.

If there are two different interns working with a client in both individual and group, the "individual" intern makes the appointment to complete the graduation certificate and posttests, making sure to schedule it after the final session of the latest-ending treatment. The "individual" intern remains responsible for tracking the client and seeing that this is completed, even if the individual sessions stop before the group meetings are completed.

Consecutive Treatments Type 1 (See Appendix M)

Here a client takes one treatment, completes it, then begins a second treatment 1 day to 5 weeks 6 days after the posttests for treatment one were given. An example would be the client who completes her individual sessions and then enters a group. This client takes posttests at the end of the first treatment, and at the end of the second treatment. No pretest is administered at the beginning of the second treatment (the posttests from the first treatment serve as the pretests for the second treatment).

Consecutive Treatments Type 2 (See Appendix M)

Here a client takes one treatment, completes it, then begins a second treatment 6 weeks or more after the posttests for the first treatment. This client is given pretests before beginning the second treatment and posttests after completing the second treatment.

CHAPTER 5

TREATMENT DESCRIPTIONS

It is important to note that all the treatments utilized in our program focus on the participant's thoughts, feelings and reactions to computers and technology. Our program teaches skills that are transferable to any computer in any technological form. We do not teach computer instruction. The only "hands-on" interaction a participant has with the computer is to create her own personalized graduation certificate (see section entitled "In-Vivo Component" at the end of this chapter).

All individual treatment sessions are 30 minutes and the client and intern meet twice a week. The sessions are goal-oriented and have a clear structure. The intern is responsible for keeping the client on task. Individual treatments are usually completed within 5 weeks.

NOTE: Much of this chapter is written as though addressing a graduate-student intern.

Intake Interview

Anyone assigned to an individual treatment by the Clinical Director, after assessment has been completed and scored, will be individually interviewed by an intern.

The Consent for Computerphobia Reduction Program form must be signed (this form gives full disclosure) at the beginning of the session. Meet the client in the waiting room, escort her to the treatment room and explain the

consent form. Allow the client time to read and sign the form. Ask if there are any questions about the consent form and answer any questions.

Begin to build a relationship with the client through active listening and reflecting. Provide structure and stay on target; each session has a goal to be accomplished. One of the goals in the first session is to establish rapport with the client.

Find out how the person experiences her discomfort about computers and computer-related technology. Start global/general ("Tell me about the kinds of experiences you've had with computers"; "What your discomforts like?") and then become more specific. Get clear, detailed information such as: "how often does it occur?", "how long does the discomfort last?", "how many things cause discomfort (automatic teller machines, VCR's)?", "when did discomforts begin?", "how do they show up?", "what do you tell yourself?", "how are you feeling inside?"

Ask about any previous treatment, in general, as well as for computerphobia-related problems; find out the purpose of previous treatment. If the person has a preconceived notion of treatment, for example long-term talk therapy, let her know this will be different. Describe the treatment: directive, fast-paced, with specific goals and homework assignments. Treatment is five weeks long, meeting for 30 minutes, twice a week.

The assigned treatment should "fit" with what the person discloses to you in the intake session. For example, if the client has been assigned to Systematic Desensitization (SD), does she appear anxious and complain of nervousness, anxiety, tenseness, sweaty palms or general discomfort around computers? If the client has been assigned to Thought Stopping/Covert Assertion (TS/CA), does she make statements like, "I just don't think I can learn how to use computers" or, "Everyone else seems to catch on so fast!"?

If the assigned treatment seems to "fit", summarize what the treatment will entail and the skills the client will learn. For SD, summarize for the client what you've heard ("What you're telling me is when you interact with computers your heart starts pounding...anxiety gets in your way..."). Summarize the treatment that you will be doing ("We'll be teaching you how to relax and how to apply that relaxation to all the times you used to be anxious around computers.") Ask the client to bring a cassette tape to the next session for the relaxation training. Set up the next appointment, and your general meeting schedule (e.g., "We'll be meeting Tuesdays and Thursdays at 1:30 PM).

For TS/CA, summarize the negative thoughts you've heard ("What I hear you saying is that you tell yourself things like, 'I can't ask for help; people will think I'm stupid' or 'I'll never figure this out' and you're uncomfortable

around computers.") Summarize the treatment you will be doing ("We'll be teaching you to be more aware of your negative thoughts, how to stop them and how to replace them with positive, motivating ones...") Set up the next appointment and general schedule.

If the symptoms you see in intake interview don't seem to fit the assigned treatment (i.e., a person assigned to SD expresses extremely negative cognitions and doesn't seem to experience least bit of anxiety) at the end of the interview review the person's set of discomforts; reflect what you've heard, etc. Assure the client she will learn skills in the program that will help her to feel more comfortable and confident about using computers. Set up the next appointment. Consult with the supervisor after completing the interview and before the second session to discuss the discrepancy you see and to determine the treatment of choice.

Systematic Desensitization (SD)

The following section will briefly describe the theory behind Systematic Desensitization followed by an overview of the SD components and a session-by-session outline of the SD treatment. Please see Wolpe (1982) and Rimm and Masters (1979) for additional SD information.

Theory

The client experiences a conditioned response of anxiety when interacting, or thinking about interacting with

computers or computer-related technology. SD will counter-condition or re-condition the client to experience relaxation instead of the anxiety the person formerly experienced. Treatment involves first teaching the client to relax, then how to replace the anxiety response with this relaxation response in situations relating to computers.

Overview of Components

Subjective Units of Discomfort Scale (SUDS). The SUDS rating ranges from 1 to 100 and is a way for the client to describe how anxious she is feeling at any given time. This is useful for the intern during sessions (such as knowing how fast to proceed with transposition) and for the client to know more about her own responses while learning relaxation skills.

Relaxation Training. Relaxation training involves tensing and then relaxing the major muscle groups of the body, beginning with the feet and legs and moving up to the shoulders and face. Relaxation is associated with a cue word which the client later uses to become relaxed on her own command.

Visualization Training. This involves teaching the client to visualize scenes (with eyes closed) with clarity and experience them as though she were really in the scene. Visualization is used to promote relaxation, as well as to create a hierarchy of situations around computers. Rating

the scene with a SUDS level describes the subjective experience numerically.

Hierarchy Construction. A set of 10 situations about computers is created, ranging between a SUDS value of 10 and 100. The situations typically range from experience-distant and nonanxiety-producing to hands-on situations which currently cause high anxiety for the person.

Transposition. Relaxation and visualization of a pleasant scene is combined with progressively visualizing each computer-related situation in the hierarchy. The client is systematically desensitized and is able to relax in the previously anxiety-producing situations.

Outline of Systematic Desensitization Treatment Sessions

Session	Session Content
1	Intake interview
2	SUDS, relaxation, and visualization training
3	Visualization training (as needed), hierarchy construction
4	Read & re-rate hierarchy, complete hierarchy
5	Transposition
6	"
7	"
8	"
9	"
10	In-vivo, posttests

At the beginning of each treatment session tell the client the goal for that session ("What we're going to do today is...") At the end of each session tell the client what you'll do the next time you meet, and give assignments (e.g., "What we're going to do next time is_____and you are to do_____in the meantime.").

Session 1

Introduce yourself, get acquainted, explain the program and get information through the intake interview. (See section entitled "Intake Interview" above.)

Session 2

SUDS Training. Explain to the client that this is a system used to indicate her comfort level at any time. Explain that the scale goes from 1 to 100 with 1 = absolute calm and 100 = the most uncomfortable you can imagine feeling, like absolute panic ("This gives me information about what you are feeling inside at any given time. Right now I want you to practice."). Ask current SUDS level; then ask what her typical "running-around" level is. Explanation and practice takes about 5 minutes. Re-check SUDS level throughout the remainder of the sessions, whenever it is appropriate.

Relaxation Training. Tape record the relaxation procedure on a cassette brought by the client and have the client use the tape for practice two times a day, every day for 1 to 2 weeks. The client will develop a cue-controlled relaxation response through choosing a word such as "calm" or "relax" and pairing it with total body relaxation (absolute absence of anxiety). Tell the client, "You'll develop a skill and after a while, you can apply it to yourself any time and anywhere you want; you can tell

yourself to relax around computers, relax for exams, job interviews, in social situations, etc."

Have the client get as comfortable as possible, loosen tight clothing. Ask if the client has had any injuries or surgeries that would prevent her from tensing any muscles such as back, neck or knees. If so, skip that area in the instructions to the client. Proceed through the procedure, reading it verbatim with the client's eyes closed. Keep your voice calm, yet audible (see Appendix D). This will take 10-12 minutes. When completed, ask the client's SUDS level, how she is feeling and which word she chose ("You'll begin to associate this word with the feeling of relaxation by saying to yourself, 'Relax, just relax.'")

Visualization Training. Check person's SUDS level. Explain what you're going to do. The general process is as follows:

1. Have person describe scene (whatever content) in detail
2. You note her description
3. Have her close eyes, take a couple deep breaths, relax
4. You read scene back to her
5. Have client use the finger signal when scene is clear (raise index finger)
6. SUDS rating while in scene
7. Stop scene & question clarity
8. Proceed as necessary

Begin with a neutral scene, then move to pleasant scene, do an uncomfortable scene if necessary to clarify client's ability to visualize (by noting corresponding SUDS increase).

The neutral scene will be a common situation such as being in the post office or grocery store. Have the client describe the scene in detail while you take notes. Assist in getting details by asking specific questions such as time of day, weather, what does it feel like? Have the client close her eyes and describe the scene back to the client. Have the person signal by raising an index finger when the scene is clear. Check the person's SUDS level and stop the scene. After using the phrase, "Stop the scene," ask how clear the scene was ("Did it feel like you were really there, or was it like you were watching yourself in the situation?"). If the client feels she is "really there", this indicates a good ability to visualize. Practice as needed.

If you're not sure the person is clearly visualizing, check by repeating the process with an uncomfortable scene. Check the SUDS level while the person visualizes the unpleasant scene; the SUDS level should be higher than before visualizing the unpleasant scene.

Next, repeat the visualization process with the client describing her most pleasant scene and what, if anything, she is doing in that scene (walking in the forest, lying on the beach, etc..) Note this scene in detail as you will be using it in the transposition phase. After visualizing this scene, the client's SUDS level should be lower than her "typical" level - perhaps even as low as at the end of the

relaxation. With practice, this scene should bring the person's SUDS as low as the relaxation exercise. Ask the person to practice the pleasant scene and to work on feeling as though "you're really there." Tell the client to put herself into her pleasant scene at the end of the relaxation procedure as she does daily practice.

Note: always use finger signal, check the person's SUDS rating, and use the phrase "Stop the scene" during each visualization practice. This prepares her for the transposition.

Session 3

At the beginning of the session, check the client's SUDS level and ask how the relaxation practice is going; ask what the person's SUDS level is after the relaxation procedure. Check SUDS level again and practice visualization of her pleasant scene in session. Check SUDS level; if there are problems with visualization, spend some time on the pleasant scene in the session, adding more details.

Hierarchy Construction. You will be creating 10 scenes at SUDS levels 10-100 (10, 20, 30 and so on to 100) in which the client is thinking about using a computer or is actually using one. Scenes will typically fall on a continuum from experience-distant to hands-on experience with less and less outside help. The hierarchy will contain descriptions of situations the client has actually experienced or imagines

herself experiencing. In creating scenes utilize all available information as necessary, including "where are you right now", "what time of day", "what are you doing" and "what's the weather", appealing to as many senses as possible and creating as realistic a scene as possible.

In this session you will create at least three scenes. Ask the client to describe the least uncomfortable situation (SUDS 10), the most uncomfortable (SUDS 100), and what situation falls at about SUDS 50. Create the scenes beginning with what is least anxiety-provoking (10), moving to what is most anxiety-provoking (100), and then to a scene to represent the middle of the spectrum (50). Create more scenes as time allows.

Use your knowledge of the client to judge how realistic the scenes are for this person. If you doubt the rating of a scene or sense a wide discrepancy, have the client immediately visualize the scene and ask her SUDS level. Lower numbers will tend to be experience-distant situations, while highest numbers will represent situations involving direct interaction with a computer with no assistance available.

Create as many scenes as time allows, and assign the rest of the hierarchy for the client to create as homework. If you have created scenes 10, 20, 30, 50 and 100 in the session, the client will make up scenes 40, 60, 70, 80, and 90 before the next time you meet and will bring them to the

session. In addition, the client should still be listening to the relaxation tape twice a day and visualizing her pleasant scene at the end or at any time during the day when she gets uncomfortable. The following table (modified from Weil, Rosen & Sears, 1987) provides a sample hierarchy:

Table 1
Sample Hierarchy of Anxiety-Producing Scenes for Systematic Desensitization

SUDS Level	
10	Noticing a newspaper advertisement for a computer.
20	Looking through a college catalog at the ccmputer courses offered.
30	At home earing the beeping noises the computer makes when the children are playing on it.
40	Sitting in a computer class the first day and hearing about the assignments that must be completed.
50	Having a friend help you on a computer assignment.
60	Working in the computer room on a computer assignment that is due in two weeks.
70	Having your children ask you to help them figure out a computer homework problem.
80	Getting an error message while working on a computer assignment and not knowing where the problem lies.
90	Having a class assignment due in one hour and having no one to help you if you can't figure it out.
100	Taking a timed exam on the computer.

Session 4

SUDS/Re-rating Hierarchy. Ask how visualization of the pleasant scene is going ("Are you feeling like you're really there?"), and complete the hierarchy with scenes brought in by the client. Write the scenes on paper, as the client reads them. Ask for more detail as necessary to complete each scene (e.g., which class is computer homework for?, what teacher is asking you for a class demonstration on the computer?). Take out or don't use any scary, anxious comments such as "...and I'm feeling worried." "I'm thinking about the fact that my homework is due tomorrow" is okay; "I'm really nervous and I know I'll never get this done" is not okay. You don't want to ascribe an uncomfortable feeling to the client as this is what will change through the transposition.

When everything is complete, re-rate the SUDS levels for the scenes. Have the client close her eyes and relax by using her cue word or by you describing her pleasant scene. Do this until the client is at or close to her lowest SUDS level. Read the first scene and have the client signal with her index finger when the scene is clear. Ask SUDS level and stop the scene. Proceed through all scenes.

After scene 40 or 50, give the person specific relaxation instructions between each scene (for approximately 20 seconds each time) in order to prevent an additive effect increasing the SUDS levels. Check SUDS

level and make sure it's in person's low range before going on.

After you have "SUDSed" all the scenes go back through them and make any necessary changes to end up with 10 evenly spaced from 10 to 100. Discard, change or add scenes to fill in gaps and get rid of duplicate numbers to finalize the hierarchy.

After the session, transfer each scene onto a 3x5 card and keep cards in the client's file. Also write the client's pleasant scene on a card and her "cue" word or phrase for relaxation.

Sessions 5, 6, 7, 8 & 9

Transposition. You will begin transposition when the client relaxes easily with the cue word/pleasant scene and visualizes well. The hierarchy has been re-checked and re-"SUDSed" and you feel the numbers are accurate representations of the scenes, and the scenes are evenly spaced from 10 to 100.

Tell the client that you'll be doing about 3 scenes in this session, and describe the scenes you'll be doing. Tell the client you'll be doing each scene at least twice. Tell her to signal when the scene is clear and a second time if while in the scene she experiences discomfort.

The general process is as follows: the intern first relaxes the client checking SUDS periodically until close to client's lowest SUDS, describes scene, client signals when

scene is clear, time period is measured, rate SUDS, stop scene, relax client with pleasant scene or cue word, present next exposure (either to same scene or next one.) Alternate these two relaxation cues throughout transposition or as "fits" for client. IMPORTANT: make sure to check client's SUDS during relaxation (between scenes) and do not present the next scene until client is in her low range.

Specifically, have the client get comfortable and close her eyes (use cue word or pleasant scene); get client's SUDS level down to her low. Describe the scene on the first card, having the client signal when the scene is clear.

Leave the person in the scene for 10 seconds upon first exposure and for 25-35 seconds upon second exposure. After each exposure, check SUDS level and stop the scene. Have the client relax by switching to pleasant scene (15-20 seconds) or using cue word, then present next scene. You should be cueing her relaxation in a guided fashion and checking her SUDS periodically.

If the client gives a second signal indicating the scene is creating discomfort, stop the scene immediately, get SUDS level and relax the client. If a second signal was given during the first exposure, relax the client and re-present the scene for 10 seconds, then move to 25-35 seconds. If there is still a problem, have the client get completely relaxed before re-presenting it. If there is

still a problem, relax the client and discuss what she thinks the problem is.

If a second signal was given during the second exposure, relax the client, repeat the scene for 10 seconds, then 20 seconds, then 30 seconds. If a problem continues, stop and talk with client. The increase in SUDS may be too high between scenes (if so, create a new card), or the person may be anticipating anxiety (if so, go back to previous successful card).

Throughout the transposition phase, re-check periodically how clear the visualizations are ("Did it feel as though you were really there?").

Record length of exposures and corresponding SUDS levels given by client at the top of 3x5 card for each scene. Also indicate "STOP" for times second finger signal was given. For example:

Scene	40	10′		35′	(10′ means 10 seconds)
		30		15	(SUDS rating given by client)
Scene	70	5′	STOP	10′	35′
			85	30	20

Complete about 3 cards per session. Make sure the person leaves each session relaxed (SUDS at 15 or 20) by using cue word or pleasant scene, or by finishing a hierarchy card at that level.

In subsequent sessions, always start with the scene you ended with before. Just present the scene once for 15-20 seconds and then go on.

The following is a verbatim example of the presentation of a hierarchy scene:

CARD - SUDS 50

Therapist: "Close your eyes and go to the ocean. You notice the waves and the deep blue sky....What's your SUDS? (continue relaxation until SUDS is low, then)...Now I want you to put yourself in statistics class. You're in the classroom at the beginning of class and the teacher is assigning homework on the computer; you're wondering how much time you'll have to work on it."

Client: (finger signal)

Therapist: (begins time) After 10 seconds, "What's your SUDS?"

Client: "40."

Therapist: "Stop the scene. Good. Now just relax. Relax. (15 seconds) What's your SUDS? (continue relaxation until SUDS is low)...Now I want you to go back into statistics class. You're listening to the teacher assigning homework to do on the computer and you're wondering how much time you'll have to work on it."

Client: (finger signal)

Therapist: (begins time) After 35 seconds, "What's your SUDS?"

Client: "10."

Therapist: "Stop the scene. Very good. Now go to the ocean and see how blue the waves are in the sunshine. Feel a cool breeze and hear the sounds of the seagulls." (20 seconds) Check SUDS before presenting the next scene.

Summary & Review. Once you have successfully completed transposition on all scenes, summarize and review with the

client the skills which have been learned. Ask how the client has generalized skills to other areas of her life.

Session 10

Make sure the client isn't still in a concurrent group. If so, wait until the group is finished to complete the in-vivo component. See the section entitled "In-Vivo Component" at the end of this chapter for detailed instructions.

After completing graduation certificate, give the client posttests (CARS, CTS, ATCS and Post-Treatment Questionnaire) or schedule an appointment in the near future for these to be administered.

Thought Stopping (TS) and Covert Assertion (CA)

The following sections will briefly describe the theory behind TS and CA followed by a description of TS/CA steps, a brief outline of the TS and CA sessions and a session-by-session description of the TS and CA process. For further information see Rimm and Masters (1979).

Theory

Thought Stopping is aimed at removing negative attitudes, self-doubts, and critical self-statements which lead to anxiety and to avoidance. Treatment involves getting the client to become aware of the negative thoughts (such as fear of the machine, avoidance, or feelings of incompetence or alienation) and teaching the client to stop these thoughts which are causing discomfort. Stopping the

negative self-statements creates an internal void. Covert Assertion teaches the client to fill that void with positive, motivating self-statements, such as "I can handle this."

Treatment begins with the therapist stopping the negative thoughts (external control) and moves to the client stopping the negative thoughts (internal control). After positive assertions are developed they are once again initially supplied externally. Control is then taken by the client to apply them internally. The skill eventually moves from a conscious level (yelling "Stop!") to an automatic level (as the client becomes adept at quickly stopping thoughts internally and stating a positive assertion in its place.) Our experience has shown that over the five weeks of treatment it often becomes difficult for clients to remember the initial negative self-statements as stopping them becomes so quickly and automatically accomplished.

Our treatment differs from that described elsewhere (e.g., Rimm & Masters, 1979) in that we have the development and practice of positive assertions take an instrumental role in the treatment process. The client is taught the skill of creating positive, motivating thoughts that actively combat her earlier negative, self-critical ones. The practice of then reading these intensively for several days to one week helps the client become accustomed to saying and thinking positive things to herself. This sets

the stage for the Covert Assertion working more easily and effectively in a short period of time. It also gives the client the skill to create new positive assertions and to read them to herself at any time in the future.

TS/CA Steps

Step 1. Client and therapist identify typical negative self-statements and choose several target situations for practice.

Step 2. Client closes her eyes and imagines the target situation, verbalizing her thoughts out loud. The therapist yells "STOP!" at the first sign of critical, self-defeating thoughts.

Step 3. Same as above, but client uses a finger signal to indicate that she is thinking the negative thoughts.

Step 4. Client verbalizes to self and yells "STOP!" aloud when she begins thinking negative thoughts.

Step 5. Client verbalizes to self and yells "STOP!" to self internally when negative thoughts begin.

Step 6. Client and therapist create positive self-statements; client practices for homework.

Step 7. Client states a positive self-statement aloud after stopping the negative thoughts internally.

Step 8. Client completes entire process internally, stopping negative thoughts and stating a positive self-statement in its place.

Outline of Thought Stopping/Covert Assertion Treatment Sessions

Session	Session Content
1	Intake interview
2	Gather 2-3 target situations & typical negative thoughts (themes) - Step 1
3	Steps 2 & 3 on target situations (step 2 on all situations 2-3 times, then step 3 on all situations 2-3 times)
4	Steps 4 & 5 on target situations (step 4 on all situations 2-3 times, then step 5 on all situations 2-3 times)
5	Develop positive assertions (5-10), practice reading aloud - Step 6
6	Steps 5 & 7, 5 & 8 on target situations
7	Steps 5 & 8 as needed
8	" " " "
9	" " " "
10	In-vivo, posttests

Session 1

Introduce yourself, get acquainted, explain the program and get information through the intake interview. In the

interview, assess that thoughts do interfere with the person's ability to use computers and that the thoughts are negative and critical. Discover the individual's particular discomforts around a computer, and determine that the problem is not simply a lack of skills.

Identify some of the negative thoughts that the person has. Common themes can usually be identified in the negative self-statements. They typically center around (1) fear of the machine and/or fear of hurting the machine (e.g., "It'll shock me"; "It's going to blow up"; "I'll hit the wrong button and jam the computer"; "I'll wreck the program"), (2) feelings of incompetence (e.g., "I'll never catch on"; "I can't do this"; "I feel stupid"; "I'll feel like a fool"), (3) feelings of alienation (e.g., "I'm the only one who's not getting it"; "Everyone else knows how"; "I'm not a computer kind of person"), and (4) avoidance (e.g., "I'll do it later"; "I'll get someone else to do it.").

Build rapport with the client through active listening and reflect back the negative thoughts you hear. Assure the person there is a solution to her feelings of discomfort.

Tell the individual she'll be learning to become more aware of her negative thoughts and how to stop them, and then learning to replace those negative self-statements with positive, confidence-building ones. For further information

see the section entitled "Intake Interview" at the beginning of this chapter.

Session 2

Step 1. Gather three target situations where the client is interacting with a computer or computer-related issue and her negative thoughts surface. You will use these "target" situations with her corresponding negative thoughts to proceed through the steps of Thought Stopping and Covert Assertion.

Be specific about negative self-statements by asking, "What do you say to yourself in that situation?" or, "What goes through your mind?...Guess..."). If an individual has difficulty determining thoughts, use items marked on the CTS and/or the intake form to gather information about thoughts and situations.

Once again, be aware of themes among the self-statements such as fear of the machine, feelings of incompetence or alienation, or procrastination.

Session 3

You will do each step of the following steps on all target situations 2 to 3 times before proceeding to the next step.

Step 2. Have the person close her eyes and imagine herself in the target situation. When this is clear, have the person say whatever comes to mind. When the client states the first negative thought, slam a book on the table

and yell "Stop!" Immediately ask, "What happened to the thoughts?" ("They went away") and "What's left?" ("Nothing."). When the person responds that the thoughts disappeared and left a void, reassure her, "Good. That's exactly what's supposed to happen."

You must yell loudly, especially the first time you stop a thought. If the thoughts are not going away or they come back immediately, the slamming and yelling "Stop" are most likely not aversive enough and must be done more strongly in the next practice.

Do Step 2 on each target situation at least twice. If you are stopping the same one or two thoughts each time, supply another one of the client's thoughts to "practice" with until you've "stopped" many of the negative thoughts the person has identified. ("Okay, we'll do that situation again and this time I want you to focus on the idea 'They'll think I'm stupid.'").

Sometimes at this step the person resists going on and asks if you're going to slam the book or yell again. If this happens, tell her yes, but assure the person you're yelling at the thoughts rather than at her and that the process will work to take away discomfort.

Step 3. The client closes her eyes and you read the target situation. The client verbalizes her thoughts internally. When the first negative thought comes up, the client signals with her index finger and you immediately

yell "Stop!" Check what happened to the thought and also ask, "What negative thought were you thinking?" Proceed with this step 2-3 times on all target situations, suggesting different negative thoughts as needed.

For homework tell the client to observe any situations in which negative self-statements occur.

Session 4

Step 4. You read the target situation and the client imagines herself in the situation with her eyes closed. She verbalizes thoughts internally, and at the first negative thought the client yells "Stop!" aloud. It's important for the client to yell loudly for this step to be effective.

Take time to practice yelling "stop" for clients who have difficulty with this.

Ask what thought the person stopped and what happened when she yelled "Stop." Be sure that the person practices with a variety of thoughts rather than using the same one each time. Repeat Step 4 at least twice on all target situations.

Step 5. You read the target situation and the client verbalizes internally and yells "Stop!" internally. If the client has trouble yelling "Stop!" internally, or the thoughts aren't going away, ask her to imagine you yelling "Stop!" or to visualize a big red stop sign going up to stop the thoughts.

After each practice, ask what happened, what thought was stopped and how it feels for the person to do this step.

Proceed with Step 5 at least twice on all situations.

Session 5

Step 6. You and the client create 6-10 positive self-statements that directly counter the themes of negativity previously identified. For example, "I'm intelligent and motivated" will replace "I'm stupid" or "I'll never learn." "I'm confident of my skills" will counter "I'm scared " or "I'm gonna mess up." Be sure to create at least one positive assertion for each theme of negative thoughts that comes up in the target situations.

The assertions should mainly be "I" statements and very positively worded, such "I'm competent" or "I have the right to ask for help." To assist in creating the positive self-statements, ask the client to imagine how she'd really like to feel in the given situation.

The following table (reprinted from Weil, Rosen & Sears, 1987) displays sample negative thoughts and their associated covert assertions:

Table 2
Sample Negative Thought/Covert Assertion Pairs

Negative Thought	Covert Assertion
I don't understand this!	I can figure this out!
This is too much to handle!	I enjoy the challenge!
I hope that I have enough time!	Relax, take your time.
Everyone else knows how to do this!	If others have learned this, so can I!
I feel stupid!	This is enjoyable and exciting!
I'm going to make a mistake.	I am an intelligent and capable person.
What if I hit the wrong button?	I know I can do it!

After creating the positive assertions, write them on a 3x5 card for the client. For homework have the person read each statement aloud enthusiastically 3 times a day "as if you know it's true and you've always known it was true." Have the person practice reading each assertion in the session and make sure it is read with enthusiasm. Read a few assertions enthusiastically as an example for the client, and then have her practice reading them aloud. Tell her not to worry if her feelings and thoughts don't match the positive self-statement at first. Assure the person that reading these positive assertions will work!

Session 6

Check on how the practice of positive self-statements is going.

Steps 5 & 7. In combining Steps 5 & 7, the client visualizes herself in the scene as you describe it, verbalizes negative thoughts internally and stops them internally, then says a positive assertion ALOUD. Ask what happened and what thought was stopped. Ask, "What did it feel like to say that to yourself? What happened to the void?"

Have the person go through all target situations at least twice, prompting her to use various assertions until all have been used as practice.

Steps 5 & 8. This is the last step in Thought Stopping and Covert Assertion. If there is time remaining in Session 6 begin this step. In combining Steps 5 & 8, proceed the same as above with the client saying the positive assertions internally. Ask "What did you say to yourself? What did you stop?" Again, make sure the client practices applying all of her positive assertions to her target situations. Go over each target situation at least twice.

For homework after this session, have the client practice these skills of adding positive assertions after stopping any negative self-statements in situations that come up.

Session 7, 8 & 9

Continue with Steps 5 & 8 as needed until client feels comfortable stopping thoughts and stating affirmations internally on all target situations. Decide if further treatment sessions are needed or move into a summary of skills acquired. At this point, the client has achieved the ability to identify and stop negative thoughts as well as to replace them with positive, motivating ones.

Remind the client of the need for active practice and her ability to create new positive assertions as desired in many situations. Ask how the client has used her skills around computers, as well as how she has generalized the skills to other areas of life such as job, school and personal life.

At this point Thought Stopping and Covert Assertion may be automatic for the client; she may automatically be stating positive assertions to herself in situations that previously created discomfort. Have the client continue to practice the skills between this last session and completing the graduation certificate.

Session 10

Make sure the client isn't still in a concurrent group. If so, wait until the group is finished to complete the in-vivo component. See the section entitled "In-Vivo Component" at the end of this chapter for detailed instructions.

After completing graduation certificate, give the client posttests (CARS, CTS, ATCS and Post-Treatment Questionnaire) or schedule an appointment in the near future for these to be administered.

Information/Support (I/S) Group

This section will examine the purpose and general theory behind the Information/Support Group followed by a session-by-session description of each group meeting. For further information see Yalom (1974).

Purpose and General Theory

The I/S Group is utilized as a singular treatment for "low-risk" clients and as an adjunct treatment for those "high-risk" clients who are also involved in an individual treatment program. The group meets once a week for five weeks and is one hour in duration. For clients assigned to both individual and group sessions, participation may be concurrent or consecutive (usually with the individual completed first).

This group offers a client the opportunity to practice specific exercises to promote computer comfort in a supportive environment. Additionally, the members are able to benefit from universality and gain comfort from the fact that they are not alone. Most computerphobics believe that they are the only one with their fears and discomforts and it is relieving for them to realize that they are actually one of many.

The sessions are geared toward specific topics and the exercises help the participants explore each topic thoroughly. The group leader utilizes general group theory and group processes to bring about cohesion. All group members are encouraged to participate actively.

The following is a session-by-session description of the five-week sequence.

Session I: "Myths and Realities About Technology"

Necessary Equipment. Consent for Computerphobia Reduction Program forms (see Appendix F), lined paper, pens, chalk board or equivalent.

Introduction. All new participants read and sign consent form. Leader introduces self and then all participants introduce themselves, sharing why they are part of the program.

Purpose. To acquaint clients with one another and leader, to begin to establish cohesion and universality, to help clients clarify their ideas about what computers can and cannot do. To gain a more realistic picture and increase their comfort level.

Exercise 1. Ask clients to generate two lists. One should be all the facts the client believes about what computers are able to do or what we are able to do using computers. The second list should include the things that computers are not able to do, but which people often feel they can do (5-10 mins). Have the group share their

thoughts, listing them on the board in the correct categories. Discuss ones that were in the wrong category, and how they got to be there. Discuss how people tend to use myths and fears as excuses to growth. How do the myths stop members in the group? The following describes typical responses.

Some Examples:

Facts: Perform complex calculations quickly
Store and retrieve information
Help people learn new skills
Perform tasks formerly done by humans
Talk to us - voice-generated speech
Let us pay our bills and do shopping from home
Allow us to be telecommuters (work from home with a computer hook-up to the central office)
Create employment opportunities for both people with computer skills and without (sales, etc.)
Will not operate correctly if user doesn't follow the instructions

Myths: Computers can think independently
Act independently--once you turn them on they take over
Be more intelligent than people
Ruin your mental health, physical health
Make it easy to spy on others
Take over
Computers take away personal freedom
Break easily
Ruin personal relationships

Discuss the following facts that might be interesting:

- Over 80% of the Dominguez Hills faculty plan to incorporate computers into their classes within five years.

- By 1990 between 50-75% of all jobs will involve some computer use.

- Between 25% and 50% of the population are computerphobic or anxious about computers. A recent study indicated that one-third of all professionals and executives were wary about

computers and although most eventually come to use and enjoy them, 10% avoid them completely.

Collect lists. ** Have all clients write their names on their lists.

Session II: "Fears and How to Stop Them"

Necessary Equipment. Lined paper, pens, chalk board or equivalent and Relaxation Procedure Instructions (See Appendix N).

Purpose. To identify the fears that cause discomfort and gain a practical experience in dispelling the fears and learning how to relax.

Follow-up. How did identifying the myths and realities about computers effect the group members?

Exercise 1. This exercise deals with fears about computers in their personal and professional lives. Ask clients to generate a list of fears which they have about computers in both their personal lives and at work. After five-ten minutes, have the group share their fears, listing common themes on the board. Group discussion.

Exercise 2. Have clients pick one of their fears about computers. Th[illegible]. go around the room and help each person develop a po[illegible]ctive assertion that directly combats her fear. Have members close their eyes, then have them visualize themselves in a situation where their fear arises. Tell them to clearly picture themselves in that situation and to begin telling themselves their worst fear over and over

again to themselves. Yell "stop" and slam a book. Then, tell them to go back into the situation (with eyes closed) and begin saying the positive statement to themselves over and over again. Ask them to notice how they are feeling. Sharing and discussion focuses on the effect of negative statements and how positive assertions change attitudes.

Collect fear lists. **Have clients write their names on their lists.

Exercise 3. Have clients get comfortable and take them through the relaxation procedure.

Sharing and discussion should focus on how the clients were able to relax, how different this is from their "typical" state, and how with practice of tensing and relaxing their muscles and utilizing their "cue" word, they can come to a fully relaxed state by using their "cue" word alone.

Session III: "Computer Technology in Your Future"

Necessary Equipment: Lined paper, pens, chalk board or equivalent.

Purpose. To help clients clarify what they (personally) want from computer technology in their future (immediate or long-term) and help them identify what gets in the way, and then problem-solve those issues.

Follow-up. Discuss anyone's useage of last week's techniques, awareness of fears, etc.

Exercise 1. Draw the following "grid" on the board, then explain as follows:

	GOALS	
	Immediate (0-3 yrs)	Long-term (3-10 yrs)
Personal (day to day)		
Academic		
Career		

First, following the "grid", have clients list their immediate and long-term goals each using their own paper. Second, have them list how they would want computer technology to help them achieve this goal, streamline the "doing" of it, what they would want computers to be able to do for them in each area (5-10 mins). Next, have clients share their goals and problem-solve any difficulties seen by the group members in achieving their desired or hoped for computer abilities. List "problem" themes on the board and dscuss solutions.

Examples (Theme followed by solutions):

Theme: Lack of knowledge; Solutions: classes, tutoring, learning center.

Theme: Fears; Solutions: replace myths with realities, replace negative thoughts with positive, motivating ones, individual treatment in our program, relaxation skills.

Theme: Lack of experience; Solutions: practice, tutoring, coursework.

Theme: Following Instructions; Solutions: explain that this is essential in working with any computer program, they need to take their time and follow the instructions.

Collect Client "Grids". ** Have clients write their names on their sheets.

Session IV: "Things that go bump in the night"

Necessary Equipment: Blank paper, assorted colored pens/pencils, Apple IIe computer and floppy disk. (Note: The Computerphobia Reduction Program has used an Apple IIe computer to demonstrate the internal simplicity of computers. Any personal computer can serve the same purpose, although the Apple IIe is probably the easiest to disassemble and display.)

Purpose. To help clients clarify their fears about the "guts" of the computer and how different it is from their imaginings. How their fantasies get in their way.

Follow-up. Discuss how outlining goals and problem-solving difficulties affected clients. What thinking did it inspire?

Exercise 1. Have clients draw their depiction of what the inside of a computer looks like. Give them about five-ten minutes. Then have everyone share their picture and discuss how they came to have this view. Review facts and fantasies as necessary as well as underscore any negative or fearful thoughts that may have led the clients to perceive the computer the way they do. During the last 20-30 minutes of the group, take apart a floppy disk, then remove the monitor and open up the computer and let the participants see the "guts". End with a discussion of any reactions as to the reality they now see, and what effect this exercise has had on their perceptions/cognitions about the computer.

Collect drawings. ** Have clients write their names on their drawings.

Session V: "Summary and Closure"

Purpose. To summarize what the group sessions have addressed and give clients the opportunity to discuss what they have learned.

Follow-up. What were the subsequent reactions to last week's exercise - both to each client's own drawing as well as to those of others.

Exercise 1. Summarize the preceding group topics:

1. Differentiating facts from myths about the computer and how a clear view, along with the skills from

group two increases positive feelings about the computer, one's self and learning.

2. How fears get in the way and a method to create motivating statements to encourage computer interaction. How utilizing relaxation removes the anxiety that creates discomfort.
3. Setting clear personal and professional goals regarding the computer for both the short and long-term, and problem-solving any blocks to reaching those goals.
4. Clarifying ideas about the "guts" of the computer, and how it relates to your fantasy.

Ask clients to discuss what they have received from their participation in the program and how they see it helping in the future. Mention that they may re-contact us at any point in the future. Ask how they feel about the group coming to an end.

Make an individual appointment with each member for the graduation certificate (see section entitled "In-Vivo Component" at the end of this chapter) and posttesting after you have checked to see how this interfaces with any individual treatment. If the client is concurrently receiving individual sessions, the in-vivo portion is done by the individual therapist at the end of whichever treatment finishes last.

In-Vivo Component

Rationale

The purpose of the in-vivo component is to provide the client with a "hands-on" interaction with the computer, creating a tangible reminder of her accomplishment. This allows the client to practice the skills she has learned in the Systematic Desensitization, Thought Stopping/Covert Assertion and/or Information/Support Group programs. The experience is meant to provide the clients with a concrete example of the changes they have experienced. The client will have a sense of confidence and increased comfort when interacting with a computer.

Procedure

This is accomplished by the client following the step-by-step instructions to create a personalized graduation certificate (See Appendix O). The therapist is with the client throughout the procedure but only acts as an encourager unless the client has difficulties with the instructions. The procedure begins with the client sitting down in front of the computer. She is handed an instruction sheet to follow which directs her to first turn the computer on and ends with the client giving the computer a command to print out her certificate. The client and therapist watch the certificate being printed and the therapist uses this opportunity to have the client reflect on how this experience has felt.

After the certificate is printed, the client takes the posttests or the therapist schedules an appointment within the next few days to have the client complete the testing.

CHAPTER 6

INTERN TRAINING

The Computerphobia Reduction Program treatment modules are delivered by psychology graduate-student interns. During the first two years of the Computerphobia Reduction Program the Clinical Director, a licensed Psychologist, trained the interns. Thereafter, the administrative assistant (who had also been trained as an intern by the Clinical Director) led all the initial training sessions for the new interns. Each year the Clinical Director videotaped her five half-day training sessions, allowing the interns to review the material at a later date. Additionally, during the first grant year the Clinical Director "field-tested" the treatments. She videotaped a SD treatment and a TS/CA treatment. These sessions were viewed by the interns as part of their training and could be used as review tapes for the various procedures. Between training sessions, the interns were assigned reading, videotape viewing, and role-playing assignments. The following outline briefly describes the content of each session. For greater detail consult the earlier chapters of this manual.

Intern Training Curriculum Outline

A. Training Session 1

1. Introduction to Computerphobia Office - layout of rooms
2. Office Procedures

a. Forms - explain use

b. Files - how to set up

c. Office Duties - phone calls, appointment scheduling, etc.

d. Phone Machine - operation

e. Appointment Book - use/filling in

f. Interns' Schedules - personal planning form

g. Interns' Boxes/Message Slots/File

3. Testing

a. Explain each test - what it tests/measures

b. Explain scoring and administration procedures

c. Explain use of Computer Comfort Profile

4. Security - opening & lock up procedures, signs

5. Confidentiality

6. Use of Video Camera and Equipment - See Appendix C

7. Coverage Schedule/Keys/Parking Sticker

8. Treatment Types and Sequences - 2 days/week (MW, TTh), 30 min. each; group once/week for 1 hour

9. Practice & Assignments:

a. Take all three measures (CARS, CTS & [illegible]FCS)

b. Rimm & Masters, (1979), Behavior Therapy, chapters 1, 2, & 9

c. Wolpe, (1982), The Practice of Behavior Therapy, chapters 5, 6, & 8

B. Training Session 2

1. Overview of Behavior Therapy

2. Intake Interviews

3. Overview of the Systematic Desensitization Process:

   a. Theory

   b. Components - brief description of each:

      (1). SUDS

      (2). Relaxation Training

      (3). Visualization Training

      (4). Hierarchy Construction

      (5). Transposition

4. SUDS Training

5. Relaxation Training

6. Practice & Assignments:

   a. Two intake interviews

   b. Relaxation procedure

   c. Watch videotaped sessions 1 & 2 with SD client

C. Training Session 3

   1. Review Practice - any problems/discuss

   2. Systematic Desensitization - continued

      a. Visualization Training

      b. Hierarchy Construction

      c. SUDS Re ating

      d. Transposition

   3. Practice & Assignments:

      a. SUDS Explanation

      b. Visualization Practice

      c. Transposition (relaxation with anxiety-provoking

scene; use finger-signal instruction, "stop the scene" and SUDS)

d. Watch session 4 with SD client

e. Read chapter on Thought Stopping if haven't yet!!

D. Training Session 4

1. Review Practice - any problems/discuss

2. Overview of Thought Stopping & Covert Assertion

a. Theory

b. Components

(1). Thought Stopping: Steps 1 - 5

(2). Developing Positive Self-Statements; Step 6

(3). Covert Assertion: Steps 7 & 8

3. Practice & Assignments:

a. Gather 2-3 typical situations/negative thoughts/themes

b. Steps 1 & 2 on a target situation

c. Watch selected videotaped TS/CA sessions

E. Training Session 5

1. Information/Support Group:

a. Purpose

b. General Group Theory

(1). Cohesiveness

(2). Group Processes

c. Session by Session - explanations of content and procedures

2. Process Notes - date & document every contact between

you and the client (phone contact/client contact letter sent). For treatment sessions, use the format listed below:

a. Individual Sessions

(1). Label - "session #1", "group #4", etc.

(2). How client seemed - subjective statement about affect, appearance - "animated"/"eager to get started", etc.

(3). Work accomplished - list self-statements, scenes working on - "practiced relaxation"; "began transposition"; "typical SUDS_____", etc.

(4). Any Problems - client not doing homework, SUDS level high - note: always use numbers to indicate SUDS level

(5). Homework Given - "practice positive self-statement cards"

(6). To Do Next, TDN - "gather rest of hierarchy"; "read & re-rate"

b. Group Sessions

(1). Client Attendance - "client arrived early, cancelled, no show, no phone call"/"10 minutes late"

(2). How Client Seemed - "talkative"/"withdrawn & depressed"; "interested in group discussion"

(3). Participation Level - "client participated

only when directly addressed"; "client initiated group discussion"

(4). Any Problems - "client fell asleep in group"; "client consistently comes 10 minutes late"

CHAPTER 7

OUTREACH STRATEGIES AND DEVELOPMENT OF A REFERRAL SYSTEM

Overview of the Process

The outreach strategies for our Computerphobia Reduction Program developed over time, growing with the changing needs of the program. Our on-campus strategy was three-tiered, reaching students, faculty/administrators, and key resource personnel. Media and professional outreach completed our multidimensional system.

Student Outreach Strategies

Individual students can be informed about the Computerphobia Reduction Program by contacting them initially at registration. Interns at a table near the entrance/exit with flyers and posters reach people when they are registering for computer classes that may be anxiety-provcking.

In-class screenings are an excellent vehicle to reach students. A student's level of discomfort around computers is identified, results are given in the form of a Computer Comfort Profile and the student is informed about the program. Potential classes range from computer classes, where a student may have initial or continued contact with computers, to humanities social science classes, where a student may be uncomfortable using computers. Any class in any discipline where computer use or instruction is incorporated should be considered.

Also, posters describing the Computerphobia Reduction Program are a good way to catch the attention of students around campus, especially in the computer labs, the learning assistance center, the library, the cafeteria and the student union.

Similarly, having interns visit these campus locations throughout the semester and give handouts makes the program more known to students.

A "sandwich board" with large posters and flyers (to be taken - see Appendix P), standing outside the clinic front door will bring in curious people passing by. Additional "sandwich boards" may be located in highly populated areas around campus.

Faculty/Administration Outreach Strategies

Faculty members can be contacted in a variety of ways and informed of the need for, as well as the availability and success rate of the program. Initially instructors may be sent letters (see Appendix Q), phoned or contacted in person by the director or administrative assistant. In this contact, it is good to offer an in-class screening for the instructor's classes, emphasizing the advantages of computerphobia reduction for students' performance in classes involving computer use. Feedback to the instructors regarding the number of "at-risk" students is helpful in promoting their understanding of the problem. Many of our faculty that utilize computers in their coursework have

allowed participation in the Computerphobia Reduction Program to either earn the student extra credit or to replace (partially or totally) a class assignment. The faculty have been willing to include this information on their course syllabi as an additional means of promoting student self-referral. These faculty have experienced "first-hand" the positive changes a student makes after participating in our program (improved attitude and course performance) and are therefore eager to motivate their students to utilize our services. Follow-up letters and phone calls are essential reminders to faculty who have students "at risk" in their classes. They can be asked to remind their students about our program and about time growing short in the semester for those who have not yet contacted the program (see Appendix Q).

A faculty luncheon sponsored by the Computerphobia Reduction Program allows for a brief, formal presentation to "targeted" faculty and administration to promote understanding about the program and the referral process (see Appendix Q).

A Computerphobia Reduction Program open house allows faculty and administration to view the facility. Posters should be mounted throughout the clinic to explain the different programs offered. Interns and senior staff members can explain the program in detail and offer guided "tours" throughout the facility. The video equipment can be

effectively used to demonstrate portions of "mock" sessions with interns serving as the clients (see Appendix Q).

Key Resource Personnel

In addition to outreach on individual, faculty and administration levels, strategic referral sources include contacting directors of key services on campus, such as the computer lab, library, advisement center, information center, counseling center, women's center. Other important resource personnel include the director of student development and the director of university relations.

Media Outreach

University level

School newspapers and other publications, as well as school radio stations, can be used to reach students. Articles should be informative, yet entertaining (see Appendix R).

Local Newspaper and Radio

Computerphobia is an interesting topic for the local media. A good newspaper article can enhance the program's reputation and visibility (See Appendix S).

National Publications and Radio

Computerphobia is also an interesting and provocative topic for national media. An article in a national magazine or a radio talk show can result in extremely positive publicity for the program (See Appendix T).

Professional Outreach

Conference Presentations and Journal Publications

Other researchers need to know your successes and failures with a Computerphobia Reduction Program. Local and national conferences and professional journals can rapidly disseminate the results of your efforts (see Appendix U for sample conference presentation handout and the Reference section for journal articles).

CHAPTER 8

PROGRAM EVALUATION

It is important to provide both formative and summative evaluations of a Computerphobia Reduction Program. In our program a formative evaluation was completed after the first training program by interviewing the interns and Clinical Director to assess the strengths and weaknesses of the training. This interview was structured with specific questions concerning each training session and each homework assignment. These questions examined the clarity of the presentations and the usefulness of the assignments. The interview was also be sufficiently unstructured to allow the interns and the director to voice their general impressions of the training.

A second formative evaluation was conducted after the first semester of operation. This evaluation included interviews with the interns and the director as well as a detailed examination of the pretest and posttest data collected from the students. The method of analysis of these data will be discussed as part of the summative evaluation strategy, but it is important to note that the posttest CARS scores should be substantially lower than the pretest CARS scores, particularly for the Systematic Desensitization clients and the posttest CTS scores should be substantially higher than the pretest CTS scores, particularly for the Thought Stopping/Covert Assertion

clients. If scores are not changing in this way it is imperative that the Clinical Director examine the treatments (through the files and videotapes) to determine if each treatment is being applied in its proper form.

Summative evaluation involved comparisons of pretest and posttest scores for many variables across and between treatment types. Two research strategies were used examine the summative impact of the program. The first strategy, called a Pre-Experimental Design, involved a simple, straightforward comparison of pretest and posttest scores on all variables that are collected before and after the program. These include: CARS, ATCS and CTS total scores and subscales (Rosen, Sears & Weil, 1987); self-ratings of computer knowledge, computer attitudes, computer anxiety and computer confidence; physical symptoms of discomfort; positive and negative cognitions; and computer utilization (see Appendices D and G). For the last group of items, composite scores of similar items were formed for both pretest and posttest. The Pre-Experimental Design is useful to determine if groups of clients change from pretest to posttest. It is also useful to compare changes on specific variables by specific programs. For example, it is interesting to examine whether Systematic Desensitization clients show improvements in positive cognitions along with decreased computer anxiety. However, it should be noted that this design suffers from many alternative explanations

for changes including maturation, statistical regression, history, etc. (see Cook and Campbell, 1979 for further information on this design).

The second research strategy, using a comparison group, is called a Quasi-Experimental Design. Two possibilities are available for constructing a comparison group. The first possibility is to pretest and posttest students in courses that are not used for in-class screening. This would mean that students would not receive feedback on their scores until after the class so as not to jeopardize the results. Students from these comparison classes would, by necessity, need to be placed on a "waiting list" if they volunteered for the program. We used a similar strategy to construct a comparison group from a study that was conducted before the Computerphobia Reduction Program was begun.

A second possibility for a comparison group is to examine the students who test "at risk" in the in-class screening but choose not to attend the Computerphobia Reduction Program. These students could be posttested at the end of the course and their progress examined. This latter possibility could also be extended to include a comparison of course performance (failure/dropout rate and course grade) by the students who choose to attend the program and those who do not. It must be noted that any course credit given to those who choose to attend will confound these results.

Statistically, any summative evaluations should examine potential covariates such as age, gender, ethnic background, etc., before comparing groups. As research in the area has suggested that various subgroups of people differ in computerphobia, it is important to assess the equality of any groups on those variables. Thus, the statistical analysis of choice would be a Repeated Measures Analysis of Covariance for each pretest and posttest measure. It is possible to perform one omnibus Repeated Measures Multivariate Analysis of Covariance, but this would not illuminate specific variables of change by students in specific programs.

With any type of research design it is helpful and extremely informative to collect longitudinal data. As part of our Computerphobia Reduction Program we collected data six months after each client completed her program. Each client was mailed a packet including the CARS, CTS and ATCS as well as a Follow-Up Questionnaire (see Appendix V) and a stamped, pre-addressed return envelope. If the client did not return the packet within two weeks a reminder was sent (Appendix W). If the packet was still not returned within two more weeks a phone call was made to the client to elicit participation. It should be noted, however, that even with the most elaborate preparations and follow-through, the expected response rate to a longitudinal evaluation is minimal. These data should be analyzed by a Repeated

Measures Analysis of Covariance in the same manner as the pretest and posttest data described above.

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APPENDIX A. In-Class Consent For Assessment Form

IN-CLASS CONSENT FOR ASSESSMENT

In signing this form I am agreeing to participate in the attached written assessment procedures. I understand that the assessment is to identify what level of anxiety I have regarding computers as well as to assess my thoughts when working with computers. I also understand that the results of this assessment will be confidential and will not be given to my instructor. Within one week the results of this assessment will be given to me. At that time the results will be explained and any questions will be answered.

I have read the above and understand it fully, and I have received a copy of the consent form.

_____ _____

Signature Date

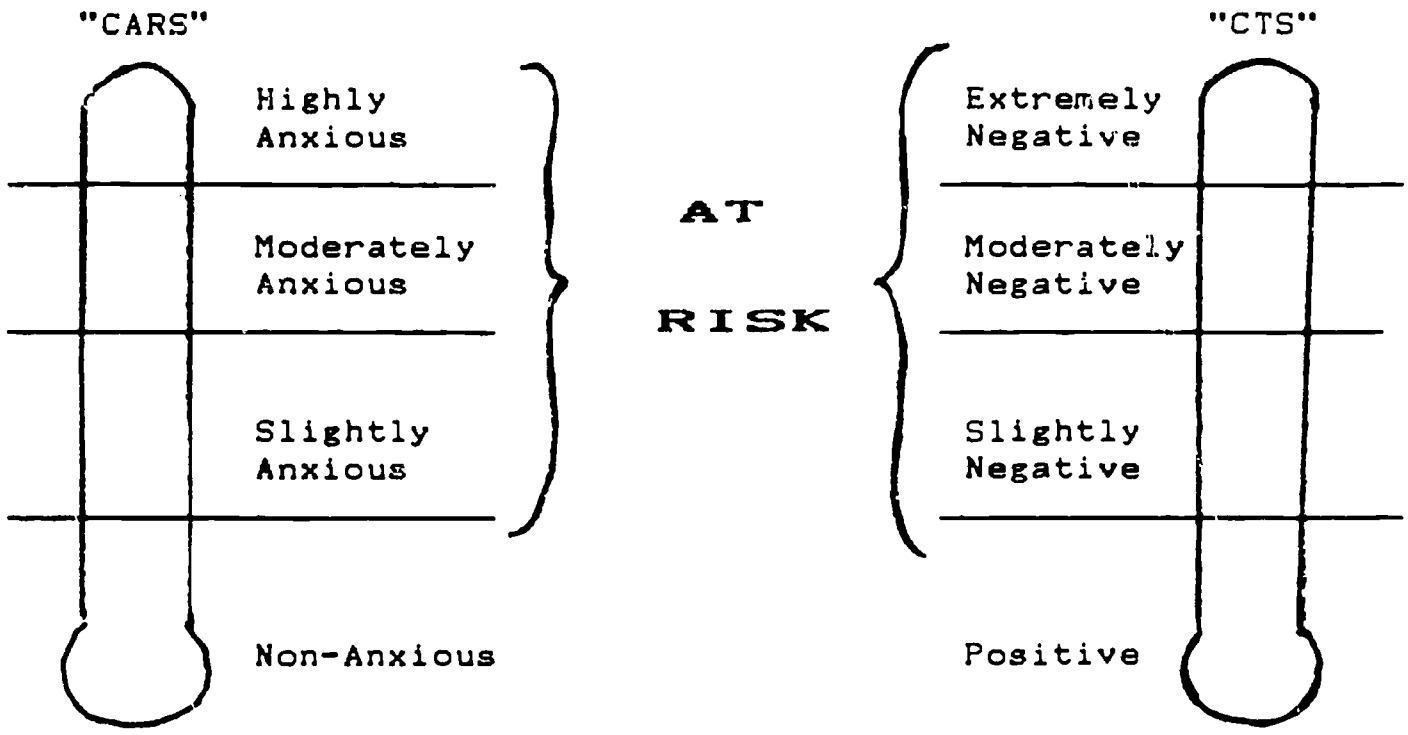
PLEASE PRINT YOUR NAME BELOW SO THAT WE CAN RETURN THE RESULTS TO YOU:

_____ _____

Last Name First Name

APPENDIX B. Computer Comfort Profile

COMPUTER COMFORT PROFILE



Name:_____

INTERPRETATION:

"CARS" - This measure shows your anxiety level about computers.

"AT RISK" Group - Those in the Highly, Moderately or Slightly Anxious Groups tend to have more difficulty learning about computers, finishing assignments on computers and being around computers because they get nervous.

"CTS" - This measure shows how positive or negative your feelings, thoughts and attitudes are toward computers.

"AT RISK" Group - Those in the Severely, Moderately or Slightly Negative Groups tend to avoid dealing with computers or have difficulty with computers because their feelings and thoughts create discomfort for them.

If you are in either of the "AT RISK" groups, you are probably uncomfortable around computers. ***WE CAN HELP.*** *If you are not in an "AT RISK" group, but still feel a bit uneasy around computers,* ***WE CAN HELP.***

CALL NOW if you are interested. Participation in the program takes approximately five weeks. Space is limited so call early to ensure your participation this semester. All programs are free of charge to CSUDH faculty, staff and students.

FOR FURTHER INFORMATION - - - CALL
516-3585

APPENDIX C. Consent Form For Computerphobia Assessment

CONSENT FORM FOR COMPUTERPHOBIA ASSESSMENT

In signing this form I am agreeing to participate in the written computerphobia assessment procedures. I understand that the assessment is to identify what level of anxiety I have regarding computers as well as to assess my attitudes towards computers. Also, this assessment will give me information about whether the Computerphobia Reduction Program would be of possible benefit to me.

The results of my assessment as well as my participation will be confidential. Any use of the information will be done in such a way as to keep my identity unknown.

I have read the above and understand it fully, and I have received a copy of the consent form.

_____ _____

Signature Date

APPENDIX D. Confidential Intake Form for Computerphobia Program

CONFIDENTIAL INTAKE FORM FOR COMPUTERPHOBIA PROGRAM

Today's Date_____ Student ID #_____

Name_____ Male___ Female___

Age_____ Date of Birth_____

Home Address_____City_____Zip_____

Work Address_____City_____Zip_____

Home phone ( )_____ Work phone ( )_____

Occupation_____

Ethnic Background:

____ Asian/Asian American/Pacific Islander
____ Black/African/Afro-American
____ Hispanic/Spanish Descent
____ White/non-Hispanic
____ Other (please specify_____)

Name of person that we can contact to locate you for any follow-up studies related to your treatment:

Name_____ Relationship to you_____

Address_____

Phone ( )_____

Please list any medications you are currently taking:

_____

Please indicate any current physical problems or illnesses:

_____

Have you been or are you currently in psychotherapy/counseling?

_____Yes _____No If yes, please briefly explain the circumstances:

_____

_____

CONFIDENTIAL INTAKE FORM (continued)

Academic major_____ Academic Minor_____

Number of units completed_____

What days and times are you in class?

Mon:_____
Tues:_____
Wed:_____
Thur:_____
Fri:_____
Sat/Sun:_____

What days and times are you at work?

Mon:_____
Tues:_____
Wed:_____
Thur:_____
Fri:_____
Sat/Sun:_____

Other Time Commitments:_____

_____

_____

How did you hear about this program? (Please check all that apply):

_____Instructor
_____An Other Student
_____Newspaper article
_____Flyer
_____Learning Assistance Center
_____Counseling Center
_____Student Development Office
_____Other (Please specify:_____

_____

_____)

How would you rate your current knowledge of computers?

____ Much Lower Than Average Knowledge
____ Below Average Knowledge
____ Average Knowledge
____ Above Average Knowledge
____ Much Higher Than Average Knowledge

How would you rate your current attitude about computers?

____ Very negative
____ Negative
____ Neutral
____ Positive
____ Very positive

How would you rate your current level of anxiety about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

How would you rate your current level of confidence about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

Which of the following currently happen to you when you use a computer or think about using a computer? (Please check all that apply)

____Sweaty palms
____Queasy stomach
____Restlessness
____Heart races
____Mind goes blank or wanders
____Shortness of breath
____Light headedness
____Other (Please Describe _____
_____)

____None of the above happens to me

CONFIDENTIAL INTAKE FORM (continued)

Which of the following thoughts do you currently have when you use a computer or think about using a computer? (Please check all that apply)

____Computers are cold and impersonal
____I feel stupid
____I'll never be able to do this
____I'm scared that I'll make a mistake and won't be able to fix it
____I feel overwhelmed
____How can I get out of this?
____Everyone else knows what they're doing
____I am totally confused
____Other (please describe_____

_____)

How many times have you used computers in the following ways?

Automatic teller machine	___Never	___1-2 times	___3-5 times	___6+
Word processing	___Never	___1-2 times	___3-5 times	___6+
Class requirement	___Never	___1-2 times	___3-5 times	___6+
Homework assignment	___Never	___1-2 times	___3-5 times	___6+
Learn programming language	___Never	___1-2 times	___3-5 times	___6+
In your job	___Never	___1-2 times	___3-5 times	___6+
In the library to locate books or journals	___Never	___1-2 times	___3-5 times	___6+
Play video arcade games	_ _Never	___1-2 times	___3-5 times	___6+
Play computer games	___Never	___1-2 times	___3-5 times	___6+

Have you used any of the following on our campus? (Check as many as apply)

_____Computer terminal
_____Apple lab
_____Commodore lab
_____I Didn't Know They existed

Do you own a home computer? ____Yes ____No

If you don't now own a home computer, do you plan to buy one in the next 5 years? ____Yes ____No

What do you hope to gain from this program?

_____

_____

_____

_____

APPENDIX E. Client Contact and Follow-Through Form

ID#_____

CLIENT CONTACT AND FOLLOW-THROUGH FORM

Date _____ Time _____

Intake Worker _____

Initial Contact _____ Phone Call
_____ Walk-in

Client Name _____

Client Phone: Home _____ Work _____

How Did You Hear About Us? _____

If from a class: Instructor _____

Course/Section _____ Day/Time _____

PROGRAM EXPLAINED:

"What have you heard about the program?" Clarify any misconceptions.

"Our program is designed to help people who avoid computers or computer-related technology. Our research has shown that either anxiety or negative attitudes typically interfere with how comfortable people feel around computers. Simple behavioral principles can be used to change this. We have designed several programs to help you. There is a two-hour screening to see whether a program would be suitable for you. If the program will help you it is 5 weeks long and will take 1-2 hours per week. You'll be involved in either group program, individual program or both."

(Initial and Date)

_____ Time involvement: app't 2x/wk; 1/2 hr ea. or 1 hr gp or both/5 weeks
_____ Feedback if not selected.
_____ Appointment set if accepted.
_____ Psych interns do treatment; receive super. lic. Psychologist
_____ No interest at this time (briefly summarize why on back...)

ASSESSMENT APPOINTMENT: Date/Time: _____

Date/Time: _____

CLIENT CONTACT AND FOLLOW-THROUGH FORM (continued)

ASSESSMENT:

_____ Open file.
_____ Consent form signed and copy given to student.
_____ Intake form completed.
_____ Testing procedure explained and tests administered.
_____ Test materials scored and placed in file.
_____ Interpretation: (circle one): Group only
T.S.+Group
S.D.+Group
Not acceptable

POST-ASSESSMENT CONTACT (initial and date one):

_____ Returned to intern to contact.
_____ Give feedback if not accepted.
_____ Discuss waiting period, if any.
_____ Schedule start date and time.
_____ No further interest now (summarize below).

Date/Time: _____

Intern: _____

APPENDIX F. Consent for Computerphobia Reduction Program

CONSENT FOR COMPUTERPHOBIA REDUCTION PROGRAM

I understand that I have been invited to participate in psychology research and receive skills training for computerphobia reduction. I understand that I will be assigned to one of three programs and that this assignment will be based on my assessment results. My program will be clearly described to me by the intern I will be working with. I also know that graduate psychology student-interns, will be delivering the services. They will be continually supervised by the Clinical Director. I understand that my treatment may be observed or audio/video taped, and that my case will be discussed with the Clinical Director. Only authorized personnel will be able to view these tapes and all discussion will be for training/supervision purposes. All interns will adhere to the laws and ethics concerning confidentiality.

Due to the nature of the program, I understand that I might experience some anxiety since I will be learning to face something I typically avoid.

If at any time I want to stop participating, I can withdraw from the program without any consequences. However, I agree to discuss any discomfort I am feeling with either my intern or my group, in the hopes that my discomfort can be reduced and that I may continue with the program. If I am dissatisfied with the program upon completion, or if I want to stop participating due to discomfort, I agree to contact the Clinical Director of the program, Michelle M. Weil, Ph.D. at 516-3585, to plan further assistance if necessary.

Upon completion of the program I understand that I will be asked to fill out some post-treatment assessment instruments and that I may be asked to talk with an evaluator at that time or in a few months about the effects of the program.

If I have questions at any point in my participation, I can contact one of the project directors or my intern at 516-3585.

Project Director: Larry D. Rosen, Ph.D.
Clinical Director: Michelle M. Weil, Ph.D.
Evaluation Director: Deborah C. Sears, Ph.D.

This program has been defined and fully explained to me, and I understand what my participation involves. This is to certify that I have read the Consent for Computerphobia Reduction Program and that I agree to participate as a volunteer in this program.

_____ _____

Volunteer's Signature Date

APPENDIX G. Post-Treatment Questionnaire

POST-TREATMENT QUESTIONNAIRE

Today's Date_____

Name_____ Male___ Female___

How would you rate your current knowledge of computers?

____ Much Lower Than Average Knowledge
____ Below Average Knowledge
____ Average Knowledge
____ Above Average Knowledge
____ Much Higher Than Average Knowledge

How would you rate your current attitude about computers?

____ Very negative
____ Negative
____ Neutral
____ Positive
____ Very positive

How would you rate your current level of anxiety about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

How would you rate your current level of confidence about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

Which of the following currently happen to you when you use a computer or think about using a computer? (Please check all that apply)

____Sweaty palms
____Queasy stomach
____Restlessness
____Heart races
____Mind goes blank or wanders
____Shortness of breath
____Light headedness
____Other (Please Describe _____
_____)

____None of the above happens to me

POST-TREATMENT QUESTIONNAIRE (continued)

Which of the following thoughts do you currently have when you use a computer or think about using a computer? (Please check all that apply)

____Computers are cold and impersonal
____I feel stupid
____I'll never be able to do this
____I'm scared that I'll make a mistake and won't be able to fix it
____I feel overwhelmed
____How can I get out of this?
____Everyone else knows what they're doing
____I am totally confused
____Other (please describe_____

_____)

How many times have you used computers in the following ways?

Automatic teller machine	___Never	___1-2 times	___3-5 times	___6+
Word processing	___Never	___1-2 times	___3-5 times	___6+
Class requirement	___Never	___1-2 times	___3-5 times	___6+
Homework assignment	___Never	___1-2 times	___3-5 times	___6+
Learn programming language	___Never	___1-2 times	___3-5 times	___6+
In your job	___Never	___1-2 times	___3-5 times	___6+
In the library to locate books or journals	___Never	___1-2 times	___3-5 times	___6+
Play video arcade games	___Never	___1-2 times	___3-5 times	___6+
Play computer games	___Never	___1-2 times	___3-5 times	___6+

Have you used any of the following on our campus? (Check as many as apply)

_____Computer terminal
_____Apple lab
_____Commodore lab
_____I Didn't Know They existed

Do you own a home computer? ____Yes ____No

If you don't now own a home computer, do you plan to buy one in the next 5 years? ____Yes ____No

What did you gain from this program?

_____

_____

_____

_____

POST-TREATMENT QUESTIONNAIRE (continued)

Other than with the computer, how have you used the skills that you learned in the computerphobia program in the following areas of your life:

Personal life_____

_____

_____

School/Academic life_____

_____

_____

Career/Job_____

_____

_____

APPENDIX H. Computerphobia Program Completion Form

COMPUTERPHOBIA PROGRAM COMPLETION FORM

Date:

Student:

Dear Professor:

The above named student has completed his/her participation in the Computerphobia Reduction Program. Thank you for the opportunity to help your students.

Sincerely,

Michelle M. Weil, Ph.D.
Clinical Director

APPENDIX I. Computerphobia Office Termination Summary

COMPUTERPHOBIA OFFICE TERMINATION SUMMARY

Client Name: Today's Date:

Initial Contact Date:

Treat. Start Date-Indiv: Term. Date-Indiv:

Group: Group:

Intern-Indiv:

Group:

# of sessions completed-Indiv: Treatment Type: SD or TS (circle one)

Group:

Reason for Termination:

Narrative description of treatment process (include relationship with counselor, motivation or resistance to treatment, areas of improvement, etc.):

Condition at termination:

____ Much Improved
____ Improved
____ Slightly Improved
____ No Change
____ Slightly Worse
____ Worse
____ Much Worse

Areas of reported generalization (if any):

Termination Recommendations (include need for further treatment, and any recommendations to client):

Termination Counselor

APPENDIX J. Computerphobia Data Summary

COMPUTERPHOBIA DATA SUMMARY

Client Name _____

Measurement Period	TESTING DATE	CARS	ATCS	CTS
Pretest Part 1 Part 2				
Posttest I				
Posttest II				
Follow-up: 6 months				
Follow-up: 1 Year				

APPENDIX K. Computerphobia Reduction Program "What's Up?" Letter

COMPUTERPHOBIA REDUCTION PROGRAM

California State University, Dominguez Hills
Dr. Larry D. Rosen, Project Director
Dr. Michelle M. Weil, Clinical Director
Dr. Deborah C. Sears, Evaluation Director
(213) 516-3585

Date:

Dear ,

I have attempted to contact you by phone several times regarding your participation in the program. I would appreciate you giving me a call to let me know what's going on. If I do not hear from you by
I will take it to mean you are no longer interested at this time. If that is the case, please feel free to contact us in the future should you wish to complete the program.

Sincerely,

Psychology Intern

cc: file

APPENDIX L. Final Checklist

FINAL CHECKLIST

As you complete a file, initial each of the following, after checking to make sure all forms are completely filled out (all missing information filled in, tests dated and names on each, etc.) and forms are in the correct order as noted below.

LEFT SIDE - Bottom to Top:

_____Consent for Assessment

_____Consent for Treatment

_____Confidential Intake

_____Phone Contact & Follow Through

EARLY TERMINATION (indicate point of termination and explain briefly)

RIGHT SIDE - Bottom to Top:

Pretests:

_____CARS
_____CTS
_____ATCS

or

_____Class Testing Packet (Consent, CARS, CTS)
_____ATCS

_____Process Notes and Supervisor's Notes

Posttests:

_____CARS
_____CTS
_____ATCS
_____Post-Treatment Questionnaire

_____Termination Summary

_____Data Summary

_____Final Checklist

_____ _____
Intern Signature Date

APPENDIX M. Posttest Administration of Overlapping or Consecutive Treatments

* *

Overlapping Treatments:

First Treatment	Second Treatment
Pretest	Posttest

* *

Consecutive Treatments (Type 1):

[1 day to 5 wks 6 days between end of first treatment and beginning of second treatment]

First Treatment		Second Treatment	
Pretest	Posttest		Second Posttest

* *

Consecutive Treatments (Type 2):

[6 weeks or more between end of first treatment and beginning of second treatment]

First Treatment		Second Treatment	
Pretest	Posttest	Second Pretest	Second Posttest

* *

APPENDIX N. Relaxation Procedure Instructions

NOTE: The following is to be read to the client in a calm, soothing tone of voice. The client should be seated in a comfortable position with any tight clothing loosened and eyeglasses removed. Start the tape recorder before you begin reading this procedure.

"What I'm going to want you to do is close your eyes, and focus on the sound of my voice, and the different things I'm going to be asking you to do. All of them are going to be aimed at helping the tension flow out of you as you relax more and more . And the types of things I'll be asking you to do will be to stretch or tense different parts of your body and to hold that tension and then I will tell you to release it and to relax.

Now, what I'd like you to do is try to just tense the part of your body that I am describing. Try to let every other part of your body just stay calm and relaxed. So focus on your body now and feel the tension flow out as you relax more and more. What I want you to do first is stretch out your legs, lift them off the floor and point your feet back, your toes back toward your face, as much as you can..... really tighten your toes, your ankles, your calves, and your thighs - real tight, tighter - real tense (10-15 sec.) Now relax, just feel the warmth of relaxation in your legs and feet as you relax and notice the difference between the feeling of tension and the calm feeling of relaxation. (Repeat muscle groups as necessary). Relax, relax, feel the warmth of relaxation in your legs and feet as you relax more and more. and notice how pleasant it is to feel that warmth as it flows through your legs all the way down through your toes, just focus on the feeling of relaxing - the comfortable warmth that's flowing through your body and focus on the word relax - relax, relax. (Relax about 30 sec.)

Now what I want you to do is to tighten your bottom and your stomach as hard as you can really tight, tense tighter, tighter, hold it a bit more, (15 sec.) really tense, now relax. Notice the pleasant contrast between the relaxed feeling you experience now and the tightness you experienced a moment ago. And notice the feeling of relaxation now flowing down from your stomach through your hips and on out your toes, getting more and more relaxed. (15-20 sec. of relaxation.) I want you to take a deep breath now, take in as much air as you possibly can, really fill your stomach, - okay now slowly let it out and as you let it out let out all the remaining tension in your feet and legs and stomach, now take a few deep breaths and let them out slowly as we go on - just relax, no more tensions no more troubles - just relax, relax.

Now I want you to tighten your back muscles, tighten your back, your chest, and the muscles under your arms all at the same time. Tense, really tight, harder, really tense(10-15 sec.), and relax, relax, relax..... . Notice the heaviness of your shoulders as gravity takes them down. You're feeling more and more relaxed. With every breath you exhale, more tension leaves your body and is replaced by the warm comfortable feeling of relaxation..... . Imagine the word calm or the word relaxed, whichever one feels better to you, think that word to yourself slowly about 10 times right now and continue to take deep breaths and say a calming word or relax to yourself .... and let more and more of the tension drain away.... (45-60 sec. of relaxation).

Now we're going to work on your arms. What I want you to do is extend your arms and make two fists. Tense your hands, your arms, your forearms, and your fists really hard, really tense (10-15 sec) and relax, relax, relax. Notice the tingling sensation, relaxation in your fingers and hands. Feel the warmth in your arms. Enjoy this beautiful relaxation, relax, relax (15-20 sec.)

The next area we're going to work on is your shoulders and your neck. What I want you to do now is hunch up your shoulders as though your trying to touch them to your ears. Tighter, tighter, tenser, tenser (10-15 sec.) and relax, relax. Feel the heaviness in your shoulders and the warm feeling of relaxation ... and relax. Take a nice calm deep breath now and slowly let it out and say to yourself inside, "I am calm and relaxed", "I am calm and relaxed". Now enjoy the comforting feeling of being tension free....(20-30 sec.) relax, relax.

Now we're going to work on your face muscles. What I want you to do is open your mouth as wide as you can. Really tense up your face, wider, wider, really tense, tenser, hold it a bit more (10-15 sec.) and relax. Just let your jaw go limp and lose and relaxed, relaxed.... . Just breathe calmly and deeply and relax, relax (15-20 sec.). Now I want you to furrow your brow and tighten your cheeks and face muscles into a tight grimace, a real ugly scrunchy face, tighter, tighter, tenser, tenser (10-15 sec.) and relax, relax, relax. Feel the flow of warm relaxation enter your face and your eyes. Enjoy the wonderful feeling of relaxation through your entire body. And relax, relax (30 sec.).

I want you to take one more deep breath now and as you let it out fully, let any remaining tension drain away from your whole body. No more tension in your face, your neck, your shoulders, your arms, all the tension is gone from your stomach, from your hips, your legs, and your feet. Just breathe deeply and enjoy this relaxed feeling..... you are now totally relaxed and comfortable and calm.... and one more time, while your enjoying this wonderful feeling

that you've created for yourself, I want you to pick a word, either calm, relaxed or any other word that you would like to associate with this feeling of relaxation and say it to yourself inside. Say it calmly and notice that word is associated with the warm comfortable relaxed feeling that you have now. And each time you say that word to yourself, you feel your entire body relaxed and comfortable and calm..... Each time you say that word to yourself, you'll be able to bri back this feeling of relaxation, and warmth, and peace that you feel right now, whenever you want, this feeling can be yours..... .

Now I'm going to count to three slowly and on three you will open your eyes and you'll be refreshed and relaxed, one....., just stay calm and relaxed,...two,.....you don't have to give up this feeling just because, you're coming back, three."

APPENDIX O. Personalized Graduation Certificate Instructions

NOTE: These instructions are given to the client.

"You will be using a program named Print Shop. The program is self-explanatory, and each "page" of the program offers you choices. Follow the steps below as you make your choices. You will use the up and down arrows to move the light bar over the choice you desire. The RETURN button moves you to the next page.

1. Turn on the computer.

2. Page 1: Choose "SIGN", press RETURN.

3. Page 2: Use the arrows and choose any border you wish, press RETURN.

4. Page 3: Choose "BY PICTURE", press RETURN.

5. Page 4: Choose "GRADUATE", press RETURN.

6. Page 5: Choose "SMALL", press RETURN.

7. Page 6: Choose "CUSTOM LAYOUT", press RETURN.

8. Page 7: Place positions 1, 2, and 3, then "DONE", press RETURN.

9. Page 8: Choose any of the four following writing scripts: TECH, PARTY, BLOCK, or TYPEWRITER. Press RETURN.

10. Page 9: Press the return button twice for PARTY or TECH, four times for TYPEWRITER or BLOCK
Type CONGRATULATIONS [use the left arrow to erase any mistakes]
Press RETURN, type your first name, press RETURN twice, type YOU ARE NOW; Press RETURN twice, type COMPUTER. Press RETURN twice, type CONFIDENT with as many exclamations as you like. Press RETURN
Answer the question at the bottom "NO" and press RETURN.

11. Page 10: Move bar to **** PRINT **** and press RETURN.

YOUR CERTIFICATE WILL BE READY IN A FEW MINUTES--ENJOY WATCHING AND CONGRATULATIONS !!!!!!!!!"

APPENDIX P. Computerphobia Reduction Program Flyers

DO COMPUTERS MAKE YOU MISERABLE?

WE CAN HELP!!!

FREE, ON-CAMPUS ASSISTANCE:

COMPUTERPHOBIA PROGRAM
CAL STATE UNIV. DOMINGUEZ HILLS
CARSON, CA 90747

"Combat negative thoughts, eliminate self-doubts, reduce anxiety - Increase your confidence around computers"

(213) 516-3585
SBS B-241

CALL US FOR MORE INFO.

GAIN COMFORT AND CONFIDENCE WITH COMPUTERS, AND QUICKLY TOO!!!!

516-3585

QUESTIONS AND ANSWERS ABOUT THE COMPUTERPHOBIA PROGRAM

Q: WHAT IS COMPUTERPHOBIA?

A: "Computerphobia" refers to any degree of discomfort or negative thoughts about computers and related technology. This can range from mild discomfort or frustration to extreme nervousness.

Q: IS THIS THERAPY?

A: No. Our program is very different than traditional "talk" therapy because it is brief and structured toward a specific goal. We will give you information and teach you simple behavioral skills you can use to feel more comfortable around computers.

Q: HOW MUCH TIME DOES THIS REALLY TAKE?

A: The program takes about 5 weeks, involving 1 to 2 hours per week. You will participate in individual meetings (30 minutes twice a week) or group meetings (1 hour once a week) or both individual and group meetings, depending on your personal needs.

Q: WILL I GET ANYTHING OUT OF THE PROGRAM IF I'M ONLY SLIGHTLY "AT-RISK" OR NOT "AT-RISK"?

A: Yes. Our program can increase your confidence and your enjoyment of computers, even if you're not uncomfortable around them. If you now feel frustrated or bored around computers or if you just dislike them, or if you're not sure how you feel, our program can make working with computers more enjoyable.

Q: CAN I USE WHAT I WILL LEARN IN OTHER AREAS OF MY LIFE?

A: Yes. In addition to using your new skills with computers you can use these skills to feel more relaxed, confident and motivated whenever you wish. The skills can be used on the job, when taking tests, in your personal relationships, etc.

WHAT PEOPLE HAVE SAID AFTER COMPLETING THE PROGRAM:

"I learned how to stop my negative thoughts and to relax under pressure"

"I used to put myself down a lot; now my insecurities about the computer are gone"

"This program helped me realize that I can do what I want and not feel insecure or inadequate"

"I will do so much better now in every class that requires computer work"

"I gained confidence in myself!"

"I won't be avoiding computer-related jobs!"

"I realized that I wasn't stupid!"

"I use the skills in lots of areas of my life; things are going so much better for me now!"

Computerphobia Reduction Program

California State University, Dominguez Hills
Dr. Larry D. Rosen, Project Director
Dr. Michelle M. Weil, Clinical Director
Dr. Deborah C. Sears, Evaluation Director

What is "Computerphobia"?

A computerphobic may:

- Avoid Computers
- Avoid Computer-Related Technology (automated bank tellers, electronic kitchen aids, electronic games and toys)
- Experience Acute Stress When Required to Use Computer Technology (heart races, severe nausea)
- Dread Computer Interaction
- Experience Hostile or Strong Negative Opinions About Computer Technology

A computer-anxious person may:

- Use Computer Technology Only When Absolutely Necessary
- Experience Discomfort When Using Computer Technology (sweaty palms, anxiety)
- Experience Self-Doubt and Negative Opinions About Computer Technology

Why Should I Be Concerned?

- Between 25% and 50% of the population are computer anxious or computerphobic
- Over 80% of the faculty expect to use computers in their courses within 5 years
- By 1990 50%-75% of all jobs will involve computer use

How Can I Get Help?

The Computerphobia Reduction Program offers three treatment packages tailored to fit your particular needs:

- An Information-Support Group provides necessary information and support to address your doubts and questions.
- A second program provides a system to combat self-doubts and negative thoughts.
- A third program is aimed at reducing the high anxiety that leads to computer avoidance.

DO IT NOW!

Call **516-3585** for further information.

APPENDIX Q. Faculty and Staff Outreach Letters

COMPUTERPHOBIA PROGRAM

Dr. Larry D. Rosen, Project Director
Dr. Michelle M. Weil, Clinical Director
Dr. Deborah C. Sears, Evaluation Director

California State University, Dominguez Hills
Social and Behavioral Sciences Building B-241
516-3585

(Address)

Dear (Name),

Over the past six months we have been compiling a list of faculty who incorporate computer technology into the educational process. Surprisingly, that list includes over 80 Dominguez Hills faculty members who provide *direct* student-computer interaction as part of their instructinal activities.

Our research has shown that whenever a course requires computer interaction many students are less than completely comfortable around the computer. In fact, we have found that 25%-30% of all students can be labelled "at risk" for computerphobia while another 10%-15% are "computerphobic." Based on these data the U.S. Department of Education has funded our program for the next three years.

We would like to take this opportunity to invite you to join us for a luncheon on June 3rd at Noon in the University Center. While you are enjoying the "free lunch" we will talk briefly with you about how our program can help students become more comfortable around computers and perform better in your classes.

We look forward to seeing you on the 3rd. To help us plan the luncheon please return the bottom portion of this letter by May 29th.

Larry D. Rosen	Deborah Sears	Michelle M. Weil
Project Director	Evaluation Director	Clinical Director

Please return to Dr. Larry Rosen, Psychology Department
by May 29

Name_____

_____ Yes, I will attend the luncheon on June 3rd.

_____ Sorry, I can't attend.

COMPUTERPHOBIA PROGRAM
California State University, Dominguez Hills
Social and Behavioral Sciences Building B-241
213-516-3585

(Address)

Dear (Name),

Just before the end of the Spring Quarter you were invited to a luncheon to discuss the Computerphobia Program. The luncheon was a success with over 30 faculty members joining us in a discussion of how to involve your computerphobic students in our program. Soon you will be receiving an invitation to our Fall Open House so we may continue to share our work and ideas with you.

At the luncheon, two major themes were stressed. First, based on our statistics and your comments, a substantial number of DH students are computerphobic. Evidence shows that this computerphobia may lead to increased attrition or poor course performance adding unnecessary stress to both you and the students. Second, in order to persuade these students to make use of our program **we need your help**.

There are many ways for you to work with us. We are now going into classes, pretesting students, identifying those "at risk", giving a personalized profile to each student and briefly discussing the program with the class. This takes about 10 minutes at the beginning of two different class periods. Additionally, faculty members are doing one of the following:

* * telling students that we exist and encouraging them to come to our office for an assessment of their level of "computer comfort"

* * inviting one of us to come to a class and give the students a brief description of the program and how it may help the student

* * inviting us to pretest students and then encouraging students "at risk" to participate in the program by offering extra credit, credit for a class project or class release time.

If you are interested in working with us please call Larry at X3427 so the we may find the option that best fits your needs. Again, "we thank you for your support" (Bartles & Jaymes, 1986).

Larry D. Rosen	Michelle M. Weil	Deborah Sears
Project Director	Clinical Director	Evaluation Director

COMPUTERPHOBIA PROGRAM

Dr. Larry D. Rosen, Project Director
Dr. Michelle M. Weil, Clinical Director
Dr. Deborah C. Sears, Evaluation Director

California State University, Dominguez Hills
Social and Behavioral Sciences Building B-241
516-3585

THE FACTS

* * Based on two faculty-staff surveys:

  * * In 1982, 29% of the faculty used computers in their classes

  * * In 1984, 40% of the faculty used computers in their classes

  * * By 1989, 80% of the faculty *expect* to use computers in their classes

* * By 1990 the U.S. Department of Labor estimates that between 50%-75% *of all jobs* will involve computer use

* * Researchers estimate that between 25%-50% of the general population are "computerphobic"

* * Based on studies of nearly 1000 CSUDH students and nearly 200 students at other university campuses:

  * * 43% of the students were "at-risk" for computerphobia

  * * 11% of the students were "extremely" computerphobic

THE COMPUTERPHOBIA PROGRAM

The Computerphobia Program offers three treatment programs tailored to fit the needs of students, faculty and staff who feel *any degree of discomfort* around computers. Each program is brief (1-2 hours per week for 5 weeks) and is available both day and evening.

An Information-Support Group addresses doubts and questions about computers and computer technology in a small-group setting.

A Thought-Stopping Program provides individual aid to combat self-doubts and negative thoughts.

A Systematic Densensitization Program is aimed at reducing the high anxiety that leads to computer avoidance.

THE PROBLEM

We have used an extensive outreach program to reach the students who need our services. Since last Fall we have met with most campus organizations that deal directly with students including the Learning Assistance Center, Student Development, the Women's Center and the Counseling Center. We have sent individual letters to each CSUDH staff member. We have met with most school Deans who have directed us to individual faculty members who incorporate computers in their courses.

Last quarter we tested nearly 200 students in 11 courses in Mathematics, Computer Science and Computer Information Systems. Each student received a personal profile that indicated their level of computerphobia. In addition, each student heard a brief talk about the Computerphobia Program including an assurance that the program was brief. Over 40% of those students were told that they were "at-risk" for computerphobia. Over 20% were told that they were "extremely" computerphobic. Only two students actually contacted the Computerphobia Program!

We need your help! We know from our research that many of your students are uncomfortable around computers. We also know that our program has helped students to feel more comfortable around computers and to perform better in their courses that require computers. However, it is clear that having an "outsider" tell the student that he/she is "at-risk" is not sufficient to persuade the "computerphobic" to contact our program. We need you, as the instructor, to encourage students to contact our program. We need you to tell them that it will make computer interaction more enjoyable and will only take 5-10 hours of their time. We are more than happy to test your students and to provide individual profiles. However, it is clear to us that we need you to talk with the students about our program. As Bartles and Jaymes say: "We thank you for your support!"

COMPUTERPHOBIA PROGRAM

Dr. Larry D. Rosen, Project Director
Dr. Michelle M. Weil, Clinical Director
Dr. Deborah C. Sears, Evaluation Director

California State University, Dominguez Hills
Social and Behavioral Sciences Building B-241
(213) 516-3585

December 15, 1986

Dear Colleague,

In less than a year the Computerphobia Program has helped 75 students develop personal skills to become more comfortable around computer technology. All of our research indicates that comfort with technology is related to improved course performance.

During Spring of last year and Fall of this year we have gone into 30 classes during the first week or two of the quarter and administered a brief (10-15 minute) questionnaire to assess each student's level of "computer comfort." A week later we return to the class and give each student a personal, private profile of his/her level of computer anxiety and negatve computer cognitions. This strategy has been successful in demonstrating to certain students that they are "at risk" for computerphobia. As we distribute the profiles we describe our program and encourage any "at-risk" students to contact us.

It is our experience that students need more than a profile to convince them to use our services. Two other "motivations" are necessary. First, the instructor needs to encourage students to contact us. Our research and clinical work shows that between 25% and 50% of your students are "computerphobic." With that many students showing varying levels of discomfort with the computer it is difficult to teach using this valuable tool. Second, and most important, students are more likely to use our services if they can get course credit. Our most successful inducement is to have you offer extra credit points (usually around 5% of the course total) for participation in the program. Since the program takes 6-8 hours this seems like a fair exchange. Instructors have also given an additional extra credit choice for those students not interested in the program or those students who do not test "at risk." Building these two extra credit choices into th syllabus makes the program a viable choice for the student from the beginning of the semester when we can have the greatest potential impact on course performance.

I am writing this letter to you well in advance of the Spring semester in the hope that you will incorporate our program into your course syllabus. If you have any questions, please contact me at my home at (714) 538-6890 or contact Shari Shaw (our administrative assistant) at X3585 and we will be glad to discuss any options with you.

Thank you for your support!

Sincerely,

Larry D. Rosen
Project Director

IMPORTANT - PLEASE DO NOT IMMEDIATELY CIRCULAR FILE!

January 21, 1986

Dear CSUDH Staff Member,

The enclosed flyer describes a new, exciting program for all CSUDH staff, students and faculty. We know that your first tendency is to place this flyer in the same circular file that holds many other flyers, but we feel that this one is different. Please take a minute to read this letter and look at the flyer.

Many of us grew up in a world where there were no computers sending us letters, no word processors complicating our typing choices and no automatic teller machines confusing our banking. Unfortunately, the computer age is here and we must learn to live with it. We know that the word "computerphobia" sounds like a disease, but it may be surprising to know that nearly 40% of all CSUDH students are at risk for computerphobia. Our estimates indicate that many staff and faculty may also be at risk. That is why the federal government has funded this important program. The Computerphobia Program provides a place to become more comfortable in this technological society.

You may be surprised to know that you don't have to be frightened of computers to be "computerphobic." In fact, the majority of computerphobics deal with computers regularly. Their "computerphobia" involves personal discomfort, self-doubt or some degree of anxiety when thinking about or actually having to interact with the computer. These people can be overheard making statements like:

"I'll never learn how to use this THING!"

"I hate this machine!"

"Why can't I type my letters on a good old fashioned typewriter?"

The Computerphobia Program offers a variety of brief programs for anyone with anxiety or self-doubts about computers. Our five-week programs are tailored to meet individual needs. All programs are free and are strictly confidential. If any of the statements on the enclosed flyer about computerphobics or computer-anxious people sound like you please call us at 516-3585.

Thank you for your time,

Dr. Larry D. Rosen	Dr. Deborah Sears	Dr. Michelle Weil
Project Director	Evaluation Director	Clinical Director

COMPUTERPHOBIA PROGRAM UPDATE

2-24-87

Dear Professor:

Once again we want to thank you for allowing us to come in and test your class(es). We wanted you to know that many of your students tested "at risk" for computerphobia. We are a bit concerned that many of those "at risk" have not contacted the program to date. Since we want to make sure we can assist them this semester, it is important that they call us or come by. Larry will be calling you within the next week to let you know the exact number who tested "at risk" in your class and how many have contacted us so far. Perhaps with this information in hand, you can make an announcement, reminding them to give us a call.

Thanks again for all your help.

Michelle Weil, Clinical Director

APPENDIX R. University-Level Media Outreach

Computerphobia Under Attack At CSU Dominguez Hills

by Gail Lissauer

The heart beats rapidly. The body breaks out in a cold sweat. The stomach twists and churns. That may sound like the symptoms of stagefright on opening night. It's not — it describes the anxiety of someone having an intense attack of "computerphobia."

In our increasingly computerized society, computerphobia is no picnic. At California State University, Domingues Hills, a new project is underway designed to combat computerphobia, according to Dr. Larry Rosen, a professor of psychology and director of the program. Others involved with the project are Dr. Deborah Sears, a professor of psychology at the University who is the program's evaluation director, and R. Michelle Weil, an Orange County clinical psychologist who is the clinical director of the project.

The program is funded by a $240,000 grant from the United States Department of Education Fund for the Improvement of Postsecondary Education. The goal is to reduce computerphobia in some 600 or more college students over three years, Rosen said, and hopefully branch out to help members of industry and the community.

"The Department of Labor says that by 1990, between 50 and 70 percent of all jobs will use computers," he said. "The person with computerphobia is going to be at a terrible disadvantage if he or she can't use computers. They won't get a job."

On the college level, computers are also becoming a bigger part of the educational process. In 1982 at CSU Domingues Hills, 29 percent of the faculty used computers in their classes. By 1984, that figure had grown to 40 percent, Rosen said.

"We figure in five years, 80 percent of the faculty will be using computers in their classes, not necessarily for programming, but for teaching. A lot of faculty are requiring their students to word process," he said.

But people have a wide range of negative responses to computers, he said. At the extreme end of the spectrum, you have individuals who become acutely anxious about working with computers, Rosen said.

"People report that their minds go blank. They can't remember what to do," he said. "Then others won't even approach computers because of their complete anxiety."

There is also the person who isn't necessarily anxious about computers but who has a very hostile attitude toward them, Rosen said. "They feel computers are going to take over the world. They're concerned about privacy. They're also concerned that it's difficult to learn how to operate a computer and that you need a good mathematics background," he said. "They believe you need calculus. I tell them that my eight-year-old daughter uses a computer and she doesn't need calculus," Rosen said.

There are some psychological theories about why people don't want to deal with computers, he said.

"One theory has to do with risk taking. Some people are taught at a young age not to take risks, particularly girls. A lot of literature shows that girls have more negative attitudes than boys about computers and less interest in them than boys," Rosen said. Research shows that boys are taught to take things apart, such as radios and girls are not taught about how things work, he said.

"All the research, including ours, also shows that older people are more computerphobic than younger people," he said. "Older people grew up in an environment with no technology. They primarily learned jobs in a non-technological atmosphere. The most they had was typewriters."

"Young children seem to have no phobia about computers. We hope in 10 or 15 years we won't need this program. The kids growing up now won't be computerphobic," Rosen said.

For anxious computerphobics, the program will use a process of desensitization, he said. "Basically you create a hierarchy of stimuli. You compile a list of situations, ranging from being very far from a computer to working with a computer. Then you introduce the student to the situation and teach them relaxation techniques," Rosen said.

"Thought stopping" is a method used for people who are antagonistic or negative about computers, he said. "You get the person to verbalize what they're thinking about when sitting at a computer terminal. Most of the thoughts are negative, such as, 'I'll never understand this machine.' You teach that when you have negative thoughts, you yell 'Stop!' inside your head.

"Thought stopping" is a cue to replace negative thoughts with positive thoughts, such as 'I can do it. I'm smarter than this machine' ", Rosen said.

Sufferers of computerphobia should recognize that computers are just machines, Rosen suggests, and that they are in control of the machines.

"People have incredible beliefs such as 'You can break a computer easily' that's not true. They think that computers are smarter than they are. One student says she feels that when she plays computer games the computer cheats!

"Obviously, computers don't cheat," he said. "Computerphobics look at computers as 'Out to get them,' as mean and cruel. If you give these people the choice between working with computers and seeing the IRS, the phobics will choose the IRS."

drawing by Natalie Moromisato

Workshop Takes a Byte Out of Phobia

By Gayle Thurmond
Staff Writer

In an ever-changing society which places a heavy emphasis on modern technology, computers are fast becoming a familiar apparatus There are those, however who are afraid of an Apple or an IBM Personal Computer. There is hope for computer phobiacs and it will be offered at CSU Dominguez Hills starting winter quarter.

The Computerphobia Workshop, a program that will be under the department of psychology, is funded by a grant from the United States Department of Education's Improvement of Secondary Education. The program's primary goal is to reduce computer phobia in some 600 or more college students.

"What we are doing is helping students who are anxious about computers," Dr. Larry Rosen, professor of psychology at CSUDH said.

Others who are involved in this project are Dr. Deborah Sears, professor of psychology, who is the evaluation director and Dr. Michelle Weil, an Orange County clinical psychologist who is the clinical director of the project.

According to Rosen some people are almost scared to death of a computer and show signs of computer anxiety. Each person who has this type of anxiety shows symptoms of nervousness, cold sweats and maintains negative attitudes toward a computer.

"What we are doing is offering a program to help those students," Rosen said.

The program is a self-paced five-week course. It will not only deal with computer anxieties but other school-related fears such as taking exams.

The way the program works, is each student comes to the workshop and receives testing. Afterward, the directors will find the most appropriate way to help the student.

"With most students, we use psychological tools. The last step is using the computer comfortably," Rosen said.

Rosen feels that students, particularly those at Dominguez Hills, are afraid of modern technology.

Students are not the only ones to have problems with computers. The average american worker is being pushed out of his job as a result of not learning how to use a computer with ease.

In fact, the United States Department of Labor reports that by the year 1990, between 50 and 70 percent of all jobs will use computers.

"The person with computerphobia is going to be a mess if he or she can't use computers," Rosen said.

Rosen urged that students should get in touch with the psychology department to take advantage of this free service.

For further information regarding this program, contact the psychology department located in SBS-B241 or call 516-3585.

Computer anxiety relief is here

by Gloria Crowell
Staff Writer

It is a strictly modern ailment. Its victims include males and females, young and old, rich and poor, the educated and not-so-educated from all races and nationalities. The only thing they all share is some form of anxiety or self-doubt when faced with the darling of today's technological revolution, the computer.

Many experts say that computerphobia, the most widely accepted name for the malady, afflicts approximately 50 percent of all Americans who come in contact with computers.

Dr. Larry D. Rosen, CSUDH professor of psychology and project director of a new program to combat computerphobia, said recent studies show that "campus-wide, 44 percent of staff and students are at risk for being computerphobic."

Their symptoms may include acute distress — nausea, rapid heartbeats, excessive sweating or headaches — when confronted by computers. They may avoid computers only or avoid all computer-related technology. A few even become downright hostile. One researcher testing for computerphobia reports his subject got so mad at the computer "he dumped coffee and cigarette ashes into the computer console."

Such reactions may be extreme, said Rosen, who stressed that there are a variety of computerphobics:

"The ones who sit and shake at a computer terminal constitute only a small portion. I would classify a typical computerphobic as someone who may use computers or word processors in the course of his or her job and be fairly confident in one area of usage, but be very afraid or doubtful about their abilities to do anything else with computers."

Rosen admits that, although he feels "pretty comfortable" around computers, he has to practice positive assertion when faced with unfamiliar systems.

As part of his new program, Rosen said he recently had to tie in with a computer system in New Jersey. "I started to get nervous and told myself I'll never figure it out. Then I said to myself, 'Stop this — don't be ridiculous!' " And, he added, as soon as he turned his self-doubts into positive thoughts, the task became relatively easy for him.

But for people who are not able to turn that doubt around, he strongly recommends CSUDH's Computerphobia Reduction Program.

Student takes advantage of a new campus Computerphobia Reduction Program funded by a $240,000 grant from the U.S. Dept. of Education.

s program, said Rosen, is by a three-year, $240,000 grant from the United States Department of Education. Although only $72,000 for the first year of operation is guaranteed by the department, Rosen said he is only a "little concerned" that the Gramm-Rudman law (deficit reduction law) may affect subsequent funding. This confidence stems from the fact that Rosen said . . program is the first of its kind on college campuses and one that many educators say is sorley needed.

But students are not alone in their fear of the "big black box," for computerphobia strikes faculty as well. Rosen said a study done a few years ago by Staff Affairs showed that "quite a few of the faculty indicated a reasonably high level of anxiousness about computers."

One faculty member who readily admits to just such a fear is Dr. Violet L. Jordain, a professor of English. "I'm anti-machine!" she declared. "They're more powerful than I am. 'It' does its thing, and I have nothing to do with 'it.' "

That same feeling about computers was described by Carole Gerst, secretary in the communications department, who conceded that computers frustrated her to no end. She, too, attended a computer class where, she said, "everyone seemed to go slightly crazy — one person even yelled and screamed." Gerst says she did not quite go that far, but acknowledged she had a horrible feeling when she erased the whole disk being used for an experiment

Only Dr. W. Leonard Lee, chair of the communications department, emphatically declared he "loves computers. Best thing that ever happened! Once you know what you're doing, you're okay."

"The irrational fear we feel towards computers is a wasted emotion because they're here to stay."

In an effort to educate faculty members about the Computerphobia Reduction Program, Rosen said his office will be holding workshops for faculty over the next three years. "We want to explain to them what computerphobia is, what to look for in their students and how to test for it," he said, adding that the faculty will be given the same tests for computerphobia as the students so "they can see for themselves where they fall."

In charge of both the testing program and the design and implementation of treatment plans is Dr. Michelle M. Weil, clinical director of the Computerphobia Reduction Program. Weil is a licensed psychologist in private practice and a former psychology teacher here. She also is an adjunct professor at Chapman College in Orange.

Weil said she now has three interns, all graduate students here, working with her to help administer treatment to computerphobics. 'What we're looking at is a program where everyone wins. The people who have computer issues get assistance, the interns get training and hours towards their licensure, and we help people."

The first step in getting that help involves a two-hour screening for assessment purposes. During that time, tests are administered to assess a person's anxiety and attitude toward computers. Further, a 400-question personality inventory must be filled out.

These initial assessment measures also help the staff tailor treatment programs to individual needs, said Weil. The tests can show whether anxiety is the student's problem or whether his negative thoughts and self-doubts create a block in working with computers.

To help solve each of these problems, Weil said that three levels of treatment are available.

One treatment plan is geared specifically toward dealing with the anxiety a person may feel when approaching a computer. This treatment will consist of a "five-week, one-on-one treatment program with an intern," said Weil.

The second plan, according to Weil, is aimed at "those people for whom anxiety isn't necessarily the problem, it's the self-doubts and negative thoughts they're saying to themselves internally." Individualized counseling will also be used here.

Lastly, an information support group will be held, which, Weil said, "will be geared at doing some kinds of specific learning about the computer as well as enjoying a sense of comraderie . . . a sense that one is not alone" in the problem of computerphobia.

One purpose of this support group, according to Rosen is to "demystify the black box." To accomplish that, Rosen, said he will drop a computer to "show the students that you can't break it easily."

For some, said Weil, the support group will be all that is needed. The group will meet one hour a week for five weeks, and all students receiving treatment will be asked to join the group.

If individualized treatments are required, they will be provided in two half hour sessions per week for five weeks.

All treatments are aimed at gradual, systematic desensitization of one's fear of computers, according to Weil.

However, both Weil and Rosen stress that anyone who has a fear of any kind of machine is a prime candidate for their program.

Interested students and staff may set up assessment testing by calling the Computerphobia Reduction Program office at 516-3585. They are located in SBS-241.

APPENDIX S. Local Media Outreach

The following lists local radio talk shows where one of the Computerphobia Reduction Program directors participated:

1. Oct 15, 1986 KFWB Los Angeles, CA
2. Dec 21, 1986 KRLA/KLSX Los Angeles, CA
3. Dec 8, 1987 KPZE Los Angeles, CA

Los Angeles Herald Examiner, Tuesday, December 9, 1986

Classes calculated to combat computerphobia

Fear and anxiety keep many from using new technology

By David Lustig

Just think of all the wonderful things computers can do. They allow us to withdraw money from our bank account at any time of the day or night. They help mechanics tune cars and scientists solve mathematical problems in an instant. Doctors use them to help diagnose patients and children play games with them. Even this story was written and edited on a computer. Computers are a boon to mankind. Unless, of course, you are afraid of them.

Don't laugh. Many people distrust these mechanical marvels, afraid of pressing the wrong button, afraid of being spied on a la Big Brother and afraid of being ridiculed when the computer bleats back that an error has been made.

It is called computerphobia and, depending on the depth of the problem, it can be a mild annoyance as you go through life or a crippling malady that prevents you from being an active participant in society. More than one person has quit a job when informed that learning how to use the newly installed computer was part of the work.

Who is a prime candidate to be a computerphobic?

"It can be almost anybody," explains clinical psychologist Dr. Michelle Weil, clinical director of the Computerphobia Program at Cal State Dominguez Hills.

The worst cases, she explains, manage never even to get around a computer.

"They won't even walk by the computer room on campus if they can avoid it," Weil says. "Their fears may not be reality-based at all, thinking that there are electrodes inside that if they touch the wrong key, they will get a shock, or it can blow up, or worse yet, the computer can take over. It's a lack of knowledge of what computers can actually do to fears about one's own performance around technology. We have found that some people who tend to have computerphobia are also afraid of other forms of technology and try to avoid such things as electric typewriters, microwave ovens and even electric can openers. It can be anything."

Enter Weil and two members of the university's psychology department, Dr. Deborah Sears and Dr. Larry Rosen. As the principal members of the Computerphobia Program, their credo is simple, "Combat negative thoughts, eliminate self-doubts, reduce anxiety — increase your confidence around computers." It's even printed on their business cards.

Begun in September 1985 after receiving a federal grant, the researchers were surprised at some of their initial findings.

"We went into it believing we would find people who hadn't grown up around computers, such as older people," says Weil, "and we have not found that to be completely true. It can affect almost anyone."

The program is open to all students, faculty and administrators at the university to help them overcome the problem. But even something that seems as beneficial as helping someone overcome a fear of computers can have its detractors.

"One of the biggest battles we had to fight," says Sears about getting the initial grant, "was that many people said there was no such thing as computerphobia. People who are comfortable with computers have a hard time believing that someone would be *that* afraid of this thing.

"They said it's not really computerphobia, but it is anxious people in general. We have data that shows this is just not true. They said it's test anxiety and that's not true either. Many things you could attribute it to, our research shows it is not."

There are people on campus who don't believe the phobia is real either.

To combat this, another area of the program is designed to raise the awareness level of the faculty and administration that there are indeed uncomfortable students in class, and, with that knowledge, to create a more empathetic attitude toward them.

Sears gives an example of a teacher who had an assignment that required computer work to be completed. The teacher was surprised that as the deadline neared, some students still hadn't started the project and came away with the wrong conclusion that they were just waiting until the last minute to begin.

"He was seeing those students as lazy and irresponsible," she explains, "instead of the idea that it might have something to do with the use of computers. I think he just hadn't thought of it in that light."

What happens when members of the university take that big step by walking through the front door and admit there may be a problem?

They don't get to play with computers. Instead, an appointment is scheduled to take an assessment test — with old-fashioned paper and pencil — to determine if the person is computerphobic. After analyzing the test data, the person is either informed he or she doesn't have a problem and the program will not be beneficial or is told what degree of discomfort exists and is given a recommendation to join the program. Eighty-five percent of the people diagnosed as having computerphobia do join.

"We're not a class, no one gets college credit for being here and we do not teach how to use computers," says Weil. "We see ourselves as helping those people that cannot even make use of those (computer-learning) classes. When computerphobics go into a computer-learning class, they're so nervous or their attitudes are so negative that the information just doesn't get in. We deal with intervening with their emotional level, then get them back into the direction of the classes they need to get this information."

Depending on the level of the problem, and it can range from mild to extremely severe, the client, as he or she is considered, will either go into an individual treatment program or a group program, sometimes both. Lasting one hour a week for a five-week period, the program is a structured period of time.

"It's not 'Come in and talk about your feeling,'" says Weil. "There's a topic every week that teaches them

Dr. Michelle Weil, standing, and Dr. Deborah Sears are two of the three principals of the Computerphobia Program at Cal State Dominguez Hills.

functioning of a computer and helps them identify their fears and fantasies that have kept them away."

In addition to overcoming a fear of computers, many of the 75 people who have completed the program so far have found an unexpected side benefit. According to Rosen, many students say they've become more assertive, not just with computers, but in other situations. And several have learned to apply the anti-anxiety techniques to other problems as well.

Weil has seen similar results. "While we help you with the specific issue of working with computers," she says, "the skills we teach the clientele are ones they can apply to other areas of their life. For example, we teach them to relax specifically around computers. But they take that relaxation skill and apply it elsewhere in their life where they get anxious."

To underscore that point, Weil and Sears point to the impressive success rate of the program.

"We haven't had one person who took the treatments feel that they did not rate themselves as very improved," says Sears, "not only improved in lowered anxiety and improved attitudes, but almost every person has said one of the main things they received from the program is feeling more confident. That's wonderful."

> "While we help you with the specific issue of working with computers, the skills we teach the clientele are ones they can apply to other areas of their life."
>
> Dr. Michelle Weil

Weil is equally enthused.

"We teach people how to combat their negative attitudes and replace them with much more confidence-building, motivating thoughts. They're applying that skill not just to computer attitudes but to their work in general, as well."

The staff feels it is a win situation for everyone involved. The interns, who handle the actual treatment, are psychology students at the master's degree level gaining experience toward their licenses, . the clients benefit by being able to cope with what was considered before a dreaded enemy and Weil, Sears and Rosen picked up more valuable knowledge about computerphobia.

"I think our program is timely and necessary," says Weil. "My guess is that 15 years from now we will not be as necessary, but will continue to be around for those people who have still not acquired a technologically positive attitude along the way."

David Lustig, an L.A. writer, contributes regularly to Style Plus.

THE HEARTBREAK OF Computerphobia

Do automatic bank tellers make your palms sweat? Do push-button keyboards cause your heart to race? If so, calm down and byte the bullet. Help is on the way.

By Jim Brooks
Staff writer

MOMMMYYY!

Computers can make you feel like screaming that every so often.

You push a button. It bleeps "ABORT."

You make another command. It retorts with a new demand.

You shove. It blinks.

You cry

MOMMMYYY!

You are not alone.

Carol Woods, a 45-year-old property manager in San Pedro, is a computer-phobe, too.

"My husband bought a computer against my will," laughs Woods, "and then he was sick and passed away, so I was stuck with a computer. And *paying* for the computer. And I was going to use the computer, but I was just *terrified* of the computer."

For a while, "I would touch it about once a month and then say, 'Well, that's enough of that.'" she continues. And when she got bolder and actually started working on it, she still felt that familiar anxiety when her commands didn't match its demands, so "I had this friend of my husband's who I was constantly calling, Pete (to find out what she should do next). I thought he wasn't going to be my friend anymore if I called him one more time."

Pete shouldn't change his phone number.

Because help is on the way for people like Carol.

Armed with a $240,000 grant, Larry Rosen, a psychology professor at California State University, Dominguez Hills, is spearheading a program that aims to reduce computerphobia in some 600 students over a three-year period, with the potential of branching out into programs for area businesses and industry.

Needless to say, in a society where computers are plugged into about every facet of daily life, those who get the sweats at the mere thought of crossing wires with our electronic cousins are at a definite loss.

Says Rosen, "The Department of Labor says in five years, in 1990, about three-quarters of all jobs are going to require some knowledge of computers. I'd say that puts you at an incredible disadvantage. The person with computerphobia is going to be a mess if he or she can't use computers."

He's not talking about a few isolated cases here, either. The bearded professor suspects that up to one-third of the population experiences the phobia in one fashion or another.

His partner in the program, Deborah Sears, also a psychology professor, pushes that number even higher. "I think for people 20 or 30 and above, probably well over 50 to 60 percent" feel some level of discomfort around computers, she says.

Predictably, there is a wide range of reactions.

"The real extreme case would be something that you typically call *phobia*," Rosen explains. "That might be the person who avoids computers completely, because they're scared, because they're afraid they're going to break the computer, because they're afraid they'll never learn it. They have real intense fears, and if they're forced to sit down at a computer, they get the typical anxiety reactions: sweaty palms, your heart beats fast, (you're) sick to your stomach possibly, your mind wanders — all those physiological signs of real anxiety or stress."

Adds Rosen, "I don't think that person is either rare or unusual. My guess is probably about 5 to 10 percent of the population have that severe reaction."

On the other end of the spectrum are those people who aren't so much unglued by computers as hostile or negative toward them.

"They feel computers are going to take over the world. They're concerned about privacy. They're also concerned that it's difficult to learn a computer and you need a good mathematics background," Rosen says. "They believe you need calculus. I tell them that my 8-year-old uses a computer, and she doesn't need calculus."

In short, he says, "It's that kind of person who might avoid classes that have computers, not because they get the real severe reaction, but just because they'd rather not. ... It's really not a fear issue with them, it's a cognitive issue. They made a choice that computers are not for them for some reason."

Those predisposed to conspiracy theories might be able to make a case against the ubiquitous computer, whose cursor has weaved its way into the very fabric of daily existence.

Says Rosen, who admits to a little computer anxiety himself: "I mean, you just walk around your kitchen and there's the microwave, and there's the dishwasher, and there's the coffeemaker. I have a coffeemaker that I set to go off in the morning, and it's computerized. Then my VCR is computerized, and my television, and the list goes on and on."

Going outside the home hardly offers a respite. Even a simple trip to the bank can mean an anxiety-provoking encounter of the push-button kind.

"In one of my classes I asked my students how many people had never used an automatic teller machine, thinking nobody would say yes, and two people raised their hands," Rosen recalls. "And I asked them why, and they said, 'Well, we can rearrange our schedules so we can go during hours when the bank is open, so it's really no problem.' But really what it boils down to is they're scared to death of those teller machines."

He first stumbled across the averse phenomenon a few years ago in one of his psychology classes while teaching statistics by computer, "and the more I taught, the more I realized that their anxiety was getting in the way of their performance."

That spurred him to investigate existing literature on the issue and to start research of his own when he came up practically empty-handed. Five years later — and research that included "upwards of a thousand students" — helped him to get a handle on the situation and also to develop CARS (Computer Anxiety Ratings Scale).

Then last year his team — which also includes Sears and Michelle Weil, a clinical psychologist who is clinical director of the program — applied for a grant from the U.S. Department of Education Fund for the Improvement of Postsecondary Education. "Basically, interesting enough, what we had to do was convince them that there was even something called computerphobia out there," Rosen says. "And we convinced them. We rounded up enough experts in enough areas to say, 'This is a real issue. This is a real problem.'"

By word-of-mouth and through his psychology classes — including one tagged "Psychology of the Computer Revolution" — he has been recruiting students to participate in the program, which will start with four students in January and steadily build in size.

Given his research, Rosen says, "I think in the population in general, there's no doubt that the computerphobic is typically older and typically female."

It's hardly an earth-shattering revelation. For older people who grew up in a relatively non-technological environment, anything beyond a typewriter may appear threatening because of its unfamiliarity. For the same reason, children reared among today's computers are least likely to be their victims through sheer exposure.

As for women, the roots of computerphobia may be more tangled, buried in years of societal conditioning.

"When boys are young, they're kind of taught to take risks," Rosen says. "I mean, boys are the ones who jump up on fences and climb fences and trees and break their arms and stuff. And they're the ones who are given the radio to take apart. They're the ones who help dad mow the lawn and clean the lawn mower and take it apart. And girls don't get that. The best things that

Computer / B4

Bruce Hickson/Staff photographer

Larry Rosen, right, and Deborah Sears — psychology professors at the University of California, Dominguez Hills — look on as Bob Bishop has a close encounter of the push-button kind.

Computer

From page B3

girls got, at least in the era I grew up, was: Help mom cook; help mom clean; learn to sew. So when it comes to the computer, it can look like another big machine that they don't know how to deal with."

Others, too, have recognized the discrepancy and are trying to narrow the gap. In fact, three and a half years ago the Women's Computer Literacy Project, an organization based in San Francisco, was founded on the premise that, no matter how educated and capable they may be, women more commonly than men feel apprehensive about using computers.

Its director, Deborah Brecher, author of the new *Women's Computer Literacy Handbook* (New American Library, $8.95), believes that apprehension stems from the way computer training is taught, geared more toward the male, "rule-oriented" approach rather than the female, "process-oriented" method that takes a "holistic" view of computers.

"I use examples that relate to female experience," explains Brecher, who says 4,000-plus women have passed through the Project's classes, which are conducted nationwide, including about once a year in Los Angeles. "You know, if I'm teaching a new concept that has nothing to do with anything that someone has experienced, if I can use an analogy that's based on something that everyone knows, it makes it easier.

"I remember when I was suffering from learning about computers I couldn't understand the difference between programs and data. It was just a very confusing concept. Then finally I realized if you look at a recipe, there's the instructions part and the ingredients part. And then I realized that the program is the instructions part, that's the part you buy when of course.' "

But Rosen is quick to add that computerphobia is hardly limited to the typical profile — older and female. Men are certainly not immune.

"I've been reading a lot that in the business world, businessmen in their 40s and 50s are in real trouble with computers. . . . The technology is making them think their career is over at 40, because they feel like they're too old to master it, and so where do they go from there."

Ultimately, he says, "I have a feeling that what this is is an issue that's going to cut across everything. It's going to cut across age; it's going to cut across gender; it's going to cut across area of interest; it's going to cut across ethnic background."

And it's hardly surprising that computerphobia cuts such a wide swath, given the way programs are written, Rosen says. "They're really not written by people who are psychologically aware. I mean, you get words like 'ABORT' or 'FATAL ERROR.' It's just words that are awful, make you feel terrible, about yourself, about what you've done. I mean, just think about the psychological ramifications when you see the words, 'FATAL ERROR,' " he laughs.

For severe cases — the true phobics — Rosen says his program will offer systematic desensitization, which is psychological mumbo jumbo for teaching a person to relax when coming face-to-face with a computer. Starting off gradually, the person is taken through a series of situations involving computers, gradually building to an actual encounter.

"For example, they might be frightened of a computer in a movie. So you teach them, 'OK, think about that fear of the computer in the movie,' and then you teach them to relax at the same time. Then they might be frightened of an automatic teller machine. So you teach them to visualize the teller machine and then relax, " says Rosen.

Another program aids those who aren't necessarily phobic but have anxieties or negative attitudes toward computers. Called "thought stopping," the method involves having the person vocalize his thoughts while seated at a computer: "Oh no, I'll never be able to do this. I'll punch the wrong key. I'm going to blow up the machine, etc., etc."

"At some point, when they're verbalizing those thoughts, the intern or psychologist yells, 'Stop!' And the person is very startled and stops," Rosen explains. "And eventually what you do is train the person himself to yell stop to himself. . . . After you yell stop, you start replacing the void, the lack of anything going on in your head, with what are called positive self-assertions. You say, 'I can do it. I'm a university student. I'm smart. I've got a B average. I can whip this computer.' "

And if that doesn't help?
Well, you can always cry.
MOMMMYYY!

COMPUTERPHOBIA ?

The heart beats rapidly. The body breaks out in a cold sweat and the stomach twists and turns. That may sound like the reaction of someone who has a gun pointed at his head. It's not. That is a description, in fact, of the anxiety experienced by someone having an intense attack of "computerphobia." **Computerphobia/Page 2**

COMPUTERPHOBIA

Continued from Page 1

Torrance resident Sharon Kittell appears on the front page. Photo by Mike A. Cano.

In an increasingly computer-based society, computerphobia is no picnic.

At California State University, Domingues Hills, a new project is underway designed to combat computerphobia, according to Dr. Larry Rosen, a professor of psychology and director of the program.

Others involved with the project are Dr. Deborah Sears, a professor of psychology at the university who is the program's evaluation director, and Dr. Michelle Weil, an Orange County clinical psychologist who is the clinical director of the project.

The program is funded by a grant from the United States Department of Education Fund for the Improvement of Post-secondary Eduation for $240,000 with a goal of reducing Computerphobia in some 600 or more college students over three years, he said.

Eventually, Rosen said, he hopes the program can branch out to help members of industry and the community.

"The federal government Department of Labor says that by 1990, between 50 and 70 percent of all jobs will use computers," he said.

"The person with computerphobia is going to be a mess if he or she can't use computers. They won't get a job."

On the college level, computers are also becoming a bigger part of the educational process.

In 1982 at CSU Domingues Hills, 29 percent of the faculty used computers in their classes.

And by 1984, that figure had grown to 40 percent, Rosen said.

"We figure in five years, 80 percent of the faculty will be using computers in thier classes. Not necessarily for programming, but for teaching. A lot of faculty are requiring their students to word process," he said.

How widespread is computerphobia?

About one third of the population is to some degree apprehensive about computers, Rosen said.

But there is a wide range of negative responses people have to computers, he said.

At the extreme end of the spectrum, yo· have individuals who become acutely anxious about working with computers—they break out in a cold sweat, their hearts race, their stomachs knot, Rosen said.

Mayor erects 'Tree of Life'

Torrance Mayor Jim Armstrong has announced that a "Tree of Life" has been placed on the rooftop of the Torrance Plunge to remain there until after the New Year's weekend.

The "Tree of Life," sponsored by the Pilot Club, is designed to bring safety awareness to holiday drivers.

The "Tree of Life" is strung with green lights to signify life.

In the event of a fatal traffic accident in Torrance during the designated period, a red light replaces a green one.

"People report that their minds go blank. They can't remember what to do," he said. "Then there are others who won't even approach computers because of their complete anxiety."

There is also the person who isn't necessarily anxious about computers but who has a very hostile attitude toward them, Rosen said.

"They feel computers are going to take over the world. They're concerned about privacy. They're also concerned that it's difficult to learn a computer and you need a good mathematics background," he said. "They believe you need calculus. I tell them that my eight-year-old daughter uses a computer and she doesn't know calculus.

"It's something they never want to deal with because they don't like it," Rosen said.

There are some psychological theories about why people don't want to deal with computers, he said.

"One theory has to do with risk taking. Some people are taught at a young age not to take risks—particularly girls. A lot of literature shows that girls have more negative attitudes than boys about computers and less interest in them than boys," Rosen said.

A lot of research talks about boys being taught to take things apart such as radios and girls not being taught about how things work, he said.

"So when girls get to computers, it looks like another technological innovation they don't know how to take apart," Rosen said.

"All the research—including ours—also shows that older people grew up in an environment with no technology. They primarily learned jobs in a non-technological atmosphere.

"Young children seem to have no phobia about computers. We hope in 10 or 15 years we won't need this program. The kids growing up now won't be computerphobic," Rosen said.

For anxious computerphobics, the program will use a process of desensitization, he said.

"Basically you create a hierarchy of stimuli. You compile a list of situations, ranging from being very far away from a computer to working with a computer. Then you introduce the student to the situation and teach them relaxation techniques," Rosen said.

"You get the person to verbalize what they're thinking about when sitting at a computer terminal. Most of the thoughts are negative, such as, 'I'll never understand this machine.' You teach that when you have negative thoughts you yell 'Stop!' inside your head.

"That's a cue to replace negative thoughts with positive thoughts such as 'I can do it. I'm smarter than this machine,' " Rosen said.

Rosen suggested sufferers of computerphobia recognize that computers are just machines and that they are in control of the machines.

"People have incredible beliefs such as 'You can break a computer easily.' That's not true. They think that computers are smarter than them. One student says she feels that when she plays computer games the computer cheats!

"Obviously, computers don't cheat," he said. "Computerphobics look at computers as 'Out to get them,' as mean and cruel. If you give these people the choice between working with computers and seeing the IRS, the phobics will choose the IRS."

APPENDIX T. National Media Outreach

The following lists radio talk shows where one of the Computerphobia Reduction Program directors participated:

1. Feb 10, 1987 WTAC Flint, MI
2. Feb 9, 1987 "The Royal Reporter" syndicated across Canada to over 100 stations between April 27 and June 5, 1987
3. Feb 16, 1987 CKNW Vancouver, B.C., Canada
4. Feb 19, 1987 KVEN Ventura, CA
5. Feb 23, 1987 WDWS Champaign, Illinois
6. Feb 27, 1987 KNZS Monterey, CA
7. Mar 30, 1987 CFCF Montreal, Canada
8. Apr 13, 1987 CJOR Vancouver, B.C. Canada

Mike Greenly

COMPUTER I

The Fear That Keeps People "Off-Line"

Computerphobia — a negative reaction to computer technology — keeps many people from learning and using computers. Psychologists have now come up with ways to treat it.

I first read about Larry Rosen in the *National Enquirer*, of all places, the source of my favorite stories about babies from outer space and chickens who play the piano. Rosen is a professor of psychology at California State University. He and his associates do research on computerphobia — the fear that keeps a substantial segment of the population away from computers.

What can be learned about computer fear, a subject of interest to anyone tracking the pervasive growth of computers as an influence on the earth's future? I decided to find out — by interviewing Rosen and his co-researcher/wife, Michelle Weil, at their home in Southern California.

At the airport, en route from New York, I weighed myself on a new kind of scale with buttons to push for computerized interaction. I indicated my height and what I guessed was my bone structure. The scale replied with an estimate of how many fewer calories a day I should consume, along with moderate exercise, in order to hit my proper weight within eight months. Are there people too intimidated by computers to step on the scale? Probably.

The beautiful weather in Los Angeles is a shock. How can people be afraid of computers out here, I wonder. A soft morning breeze seems to reassure me there is *nothing* to be afraid of, nothing to resist in California. New York now seems a dark and distant moon of another galaxy, a place where people have strong reactions. New York is a town where someone might throw a computer out the window of a 37-story building as you pass below, where fear could be amplified to Computer Terror.

But how could computer-fear experts have a decent laboratory of frightened subjects in California? Computer "apathy" I could understand — a preference to go to the beach instead of learning about word processing. On this perfect, tranquilized day, I wonder if the *National Enquirer* has misdirected me to the wrong coast for computer fear.

Identifying Computerphobia

Michelle Weil's business card says:

> COMPUTERPHOBIA PROGRAM
> "Combat negative thoughts, eliminate self-doubts, reduce anxiety — increase your confidence around computers"

I encounter Weil and Rosen not at the Dominguez Hills offices of California State University but at their home. I am happy to discuss the effects of people's significant fear of technology amidst a decidedly nontechnical environment, except for three different clocks that seem to chime or ding on their own volition.

They talk with gusto about their work, sometimes overlapping each other: two articulate academics who believe that what they are learning and doing can affect the future in a significant way.

Rosen, a psychologist by training, teaches a statistics course that requires students to use computers. Six years ago, he first noticed that many of his students were having considerable trouble using computers, despite his detailed instructions. He wrote and rewrote manuals for his students, step-by-step. Some students, however, seemed panic-stricken no matter what preparation he gave them. A good half of the class were what he now considers "computerphobic," and 25% felt degrees of actual panic.

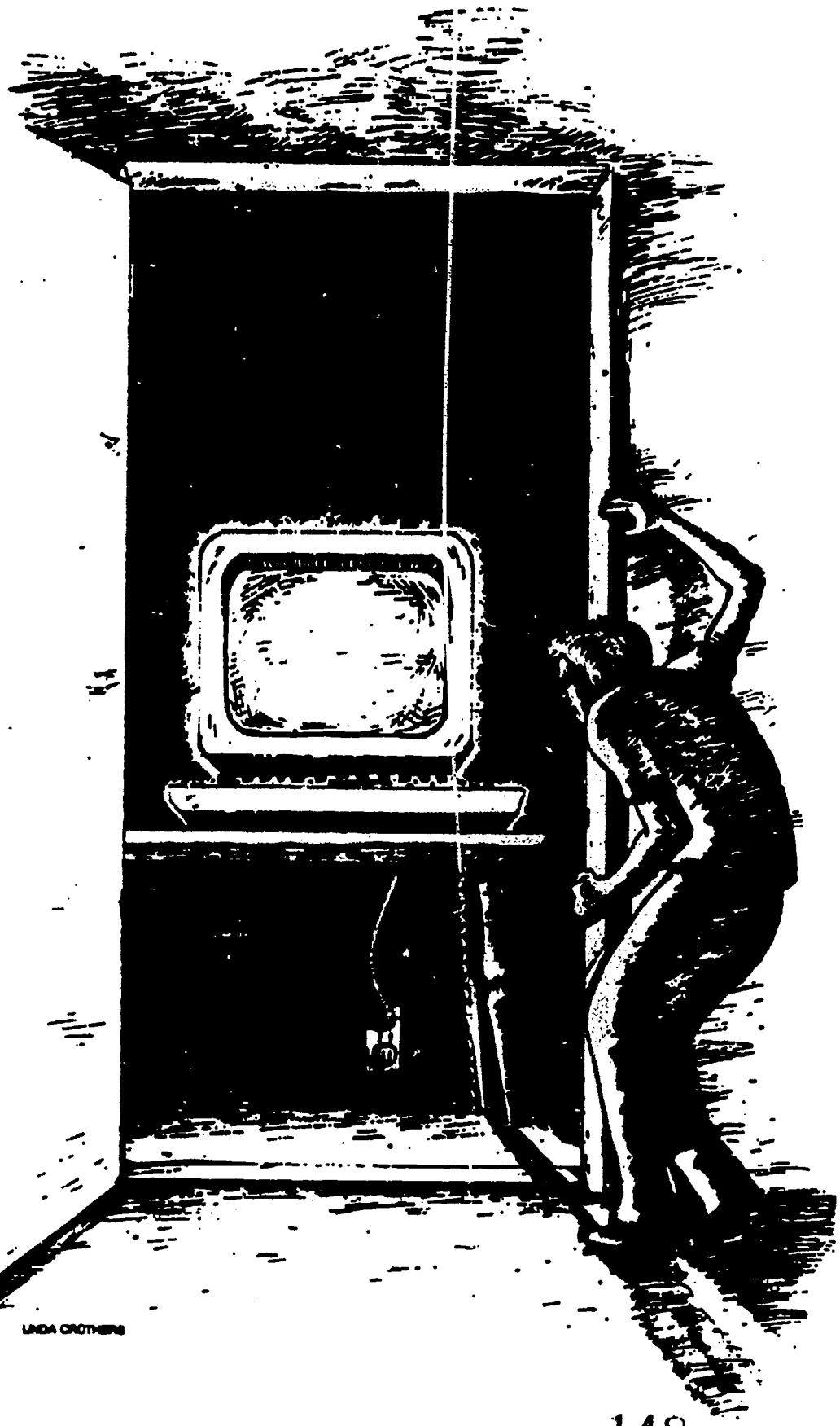
These students' discomfort with computers is likely to be a competitive drawback for them in a society where computer competence and the ability to use its productive

H O B I A

benefits is increasingly essential for many kinds of professional success.

With a colleague, Deborah Sears, Rosen searched through psychology literature to see what had been written about the condition of computer anxiety. They found virtually nothing.

At that point, they approached Weil, a therapist as well as a psychologist, and asked, "We're realizing we've got these computerphobics in our classrooms: What could you do to help them?" Weil considered the problem, then created a treatment plan on paper.



The three psychologists then went to the U.S. Department of Education Fund for the Improvement of Postsecondary Education and said, "We've found a problem, and we think we have a solution. If you fund us, we can find out if we really do." The experimental treatment project eventually obtained a three-year grant to develop a treatment model for eliminating the fear of computers.

The project was set up at the Dominguez Hills campus of California State University, where both Rosen and Weil teach. Because the campus has a broad ethnic mix of students, the test project was also an opportunity to explore computerphobia and treatment differences, if any, among whites, blacks, Hispanics, and Orientals.

"You can extend what we've done with computers," Weil says, "to technology in general." Phobic reactions to technology appear to be one reason so many people still actively avoid using the widely installed base of cash-card terminals in the United States, fail to learn how to program the videotape recorders they own, or don't use all the features of their microwave ovens. Many of the people who exhibit phobic reactions to technology fear a loss of control to machinery and find it easier not to get "involved."

Three Types of Computerphobia

The Computerphobia Reduction Program set up by Rosen and Weil has identified three typical ways people evidence computerphobia:

1. The Anxious Computerphobe exhibits overt anxiety. The user shows standard phobic reactions: sweaty palms, tension in the back, and various other physical symp-

"Computerphobic individuals . . . are not highly anxious in general. Computerphobia is a specific condition."

toms. He or she wants to get away from the computer or not even approach it in the first place. The anxiety of anticipation is enough to stop the process of learning to use the technology.

2. The Cognitive Computerphobe evidences the problem internally rather than overtly. Outwardly, the subject appears calm, while mentally conducting a highly negative dialogue with the self.

The tone of the user's inner voice is often undercutting, self-defeating, and demeaning: "I'm obviously stupid; the machine will blow up when I hit the wrong button; this screen is going to make me blind; I've got to choose quickly; this is too much to handle," etc. The subject's negative mental statements create an internal barrier to effective progress, whether or not the put-downs are consciously perceived.

3. The Uncomfortable User exhibits a milder form of either or both of these two anxiety reactions. Concentration is reduced, and the user's discomfort is manifested in a notable lack of efficiency. The individual has an unclear picture of what the computer is supposed to accomplish, either on a personal level or in the context of society as a whole.

Uncomfortable User students are less likely to succeed in classwork than non-phobic students, regardless of how diligently they work. Evidently, their own personal energy is siphoned off from the learning process into mild forms of self-deprecation or anxiety, making it hard for them to focus effectively on class requirements.

Having identified these three types of computerphobics, the research team began to implement a treatment plan designed to make short-term improvement on the phobic's attitudes and behavior. In the course of their work, they studied one major aircraft manufacturer's employee-training seminars — three sessions of eight hours each — and were surprised to learn that 30% of the employees who had taken the course actually emerged at the end being *more* computerphobic, not less. In contrast, the experimental treatment plan for the Dominguez Hills study requires only five hours spread over the course of five weeks, and its results have been remarkably positive.

Understanding Computerphobics

Computerphobic individuals, Weil points out, are not highly anxious in general. Computerphobia is a specific condition. Older students in the study have thus far been more computer anxious than younger students, but have not had more negative attitudes, cognitions, or feelings. Women have had more negative attitudes than men. White students have had more positive attitudes than nonwhite students, but also more anxiety: Latent concern is evidently heightened when a phobic subject has a more educated awareness that the use of computers is "really important for the future."

Why wasn't computerphobia recognized long ago? Rosen and Weil speculate that there have always been other apparent excuses for the computer difficulties that people experience, such as software that's not user-friendly, hardware not powerful enough to facilitate easier approaches, insufficiently clear documentation, etc. Each improvement in each of these areas, however, has clearly left a large number of people unhelped; they are still afraid. Eliminating that fear is the purpose of the experimental treatment.

Each of the three phobic types in the study receives a different kind of treatment during the five one-hour-a-week sessions. The focus of the entire program is to make a fast, clear difference in each student's ability to use computers. None of the students has any actual computer interaction until the last session in the series.

Anxious Computerphobes: Systematic Desensitization

Anxious Computerphobes are taught relaxation techniques. Then they imagine computer-related situations that heretofore have made them uncomfortable, but this time they transfer the learned feeling of relaxation to the anxiety-provoking situation. Ultimately, students can visualize moments like "getting an error message while working on a computer assignment and not knowing where the problem lies" while learning to feel genuinely relaxed during that situation.

By the time the course is completed, events that used to produce panic now evoke a calm response. At the final session, students who once considered sitting at a computer an unbearable prospect now print themselves a personalized "graduation" diploma.

Weil radiates excitement as she talks about the satisfaction of watching previously frightened people now comfortably issuing commands at the keyboard — successfully and calmly making something happen. "Their lives are changing far more than just at the computer," she says. Students begin to use the relaxation techniques not only for other "technical" pursuits (like finally learning how to program a VCR), but in other areas of life, too, such as learning how to be more relaxed on a date.

Thought Stopping and Covert Assertion: A Live Demonstration

Cognitive Computerphobes are people, Weil points out, who dialogue negatively with themselves when in a computer situation. "The first thing we have to do," she states, "is show them

Anxious computerphobes — who once found using computers unbearable — print their own "graduation" diplomas upon finishing a course to fight computerphobia.

that's what they do. We have to make them aware, word for word, of exactly what they tell themselves."

"How?" I ask her.

"Well, for example," she says, "let me just do it with you." I wait for her instructions. "Suppose you've just arrived here and you're opening up the computer on your lap," she says. I stop typing and listen. "Tell me the thoughts that go through your mind when you first open it."

"Okay," I say. "I'm wondering do I have enough memory in this bank for the interview. I'm wondering will I hit the right file. I'm wondering if I'll be able to handle the computer and the tape recorder and the Polaroid camera and simultaneously make you both feel at ease. I think I'm wondering all these things as I'm opening up the computer."

"So," she says, "we've identified that you're the type of person who, when you get started, is wondering and potentially hassling yourself about whether you'll be able to pull it all together."

"Yes," I say. That's me.

"If I were going to help you," she continues, "I would have written down those things in particular. I would have collected more information about you. Perhaps you started to say to yourself, as the interview was already in progress, 'Uh-oh, I forgot to do such-and-such. Oh, no! I should have changed the batteries,' or whatever. I would help you with that. Those thoughts are the ones that increase your discomfort. Those are the ones we're going to stop.

"These uncomfortable people are saying *really* crummy things," Weil reminds me. "Very scary things. In the process of thought stopping, we teach them to stop the thoughts completely, which creates a psychological void."

I ask her to give me a glimpse of the process. In essence, she says, she asks the subject to visualize making negative mental comments. She might then slam a book on the table and yell, "STOP!"

She demonstrates. I close my eyes and repeat to myself, "I'm not going to be able to handle this interview."

"STOP!" she shouts suddenly. "Now — what happened to the thought?"

"It sort of broke up," I tell her.

"Okay. And what did you feel inside?"

"Uh. I was shocked. I don't know. I was waiting to see. . . ."

"Right. We created a void."

"Yes."

"That's exactly what happens in thought stopping. The first step is to create the void. The person is then waiting. You've taken away the negative, and now the question is, 'What's next?'

"So now," she continues, "it's time for what we call 'covert assertion,' slipping an affirmation into that void: 'I am comfortable handling an interview; I can pull together all the aspects I need for achieving my goal.' In sum, we find the negative statements, stop them, create a void, and replace them with positive mental statements.

"At first, newly trained computerphobics will go through this process, catching statements and replacing them. Six months later, though, it's so automatic that they're in charge of a situation that used to be uncomfortable. They're reminding themselves, 'I can handle this, I'm intelligent, I feel com-

"More teachers are having to get students involved with computers even though they themselves are not truly comfortable with them."

petent.' It becomes as much of a habit to reinforce oneself as it used to be to be self-deprecating."

The Uncomfortable User: Group Therapy

Uncomfortable Users are treated in groups of up to 10 students at a time (the other two treatments are predominantly individual). Each week, counselors lead attendees through a different topic that helps them gain more awareness of the perceptions (and misperceptions) that may be making them uncomfortable with computers. The attitudes are then addressed factually.

Here's one example: Students are given paper and colored pens and asked to draw how they imagine the inside of a computer. They then share their images and talk about how they came to have them. Some of the pictures contain spiky electrodes. Others contain intricate and fragile connections of delicate wiring that look easily breakable. Still others contain crisscrossed and jagged electric connections that look as though they could easily shock the user.

After all the drawings have been compared, the group leader opens the back of a computer — and students are amazed that the insides are so solid, simple, and clean. A floppy disk is cut open, so students can compare it to a music recording. The group then discusses each member's reactions to what was seen.

Overcoming Computerphobia

What kinds of results have been achieved by the computerphobia project? The study is still ongoing, but it is already clear that participants have changed in a positive direction — less anxiety, more positive thoughts, more comfort in using a computer. Some students reported hours of extra time are now available — time previously wasted in the inefficiency of worry and anxiety. Other students report they have become more assertive and effective in their classes.

The near-term goal of the project is to train a large number of students during the last year of the grant. Beyond that, however, Rosen and Weil want to pursue identifying and correcting computerphobia in a number of different arenas: in primary and secondary education, for example, and not only with students, since a large number of teachers are computerphobic as well.

There is a common belief that, in general, children are now growing up comfortable with computers. Not so, Rosen says. He points out that there is still a great discrepancy between computer availability and comfort in affluent schools and less-affluent schools. Even young people who often play arcade games do not necessarily feel comfortable at a computer.

Another stumbling block to computer comfort is that more teachers are having to get students involved with computers even though they themselves are not truly comfortable with them. They cannot be expected to effectively pass on the most positive of attitudes to their pupils.

In addition to an interest in addressing computerphobia within school systems, Rosen and Weil also have a number of thoughts about courses tailored for business and for the public as well. Weil is considering writing a self-help book. Rosen muses about the possibility of computer hardware and software coming to the new user with a built-in computerphobia training module.

The two have long had the vision that the expertise they're developing could have many different applications. They further note that their techniques for overcoming computerphobia would almost certainly work just as well outside the United States.

"This is not a problem that is going to go away," concludes Rosen. "It's best to be aware that there are a lot of computerphobic teachers teaching our kids to use computers. What we're going to do, if we don't correct that, is produce another generation of computerphobic kids.

"We need to work with teachers, making them aware of these issues and correcting their attitudes. And we need to work with the kids, making them aware that computers are here to stay, that they're going to be very important in their lives, and that it's in their best interest to learn how to be comfortable with the technology."

"Computerphobia is treatable in a very quick and timely fashion," Weil adds. "And the comfort that is created will not only extend to people's jobs and to whatever they're producing with technology, but to their entire lives and well-being."

We shake hands. I fold up my computer and put the tape recorder in my bag. I have hired a car and driver, so I begin typing this interview immediately. Soon it will be circulated via modem and computer to readers around the world — and into households and offices where there are computerphobic people nearby.

About the Author

Mike Greenly is a marketing consultant and a pioneer of "interactive" electronic journalism. His address is 330 East 39th Street, PH-D, New York, New York 10016.

This article first appeared in electronic form on NWI, Networking and World Information, a computer communications and information service in East Hartford, Connecticut.

APPENDIX U. Conference Presentation Handouts

COMPUTERPHOBIA

DR. LARRY D. ROSEN
DR. DEBORAH C. SEARS

California State University, Dominguez Hills

DR. MICHELLE M. WEIL

Chapman College, Orange, California

CALIFORNIA STATE PSYCHOLOGICAL
ASSOCIATION CONVENTION

SAN DIEGO, CALIF.

MARCH 21, 1987

COMPUTERAPHOBIA MEASURES: SAMPLE ITEMS

COMPUTER ANXIETY RATING SCALE

The items in this questionnaire refer to things and experiences that may cause anxiety or apprehension. For each item, place a check (✓) under the column that describes how anxious (nervous) each one makes you at this point in your life. Work quickly but be sure to consider each item individually.

	Not at All	A Little	A Fair Amount	Much	Very Much
14. Using the memory on a calculator.	( )	( )	( )	( )	( )
15. Watching a movie about an intelligent computer.	( )	( )	( )	( )	( )
16. Looking at a computer printout.	( )	( )	( )	( )	( )
17. Using the automated bank teller machine.	( )	( )	( )	( )	( )

COMPUTER THOUGHTS SURVEY

Please check the box that indicates how often you currently have each of the following thoughts when you use a computer or think about using a computer.

	Not at All	A Little	A Fair Amount	Often	Very Often
25. What if I hit the wrong button?					
26. This is really interesting.					
27. I'm too embarrassed to ask for help.					
28. Others have learned this and so can I.					

ATTITUDES TOWARD COMPUTERS SCALE

The following statements address your attitudes toward computers. Place a check (✓) under the column that describes your level of agreement to each statement. Work quickly, but be sure to consider each item individually.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Computers can save people a lot of work.	( )	( )	( )	( )	( )
2. It takes a good math background to learn to use a computer.	( )	( )	( )	( )	( )
3. You can damage a computer if you don't know what you are doing when you use it.	( )	( )	( )	( )	( )

COMPUTERPHOBIA

Empirical Research Highlights

Study 1: Computerphobia Assessment

Purpose: To design and validate two separate measures of computerphobia (anxiety and attitudes) and examine their correlates.

Results:

** Computer Anxiety Rating Scale (CARS) and Attitudes Toward Computers Scale (ATCS) are both reliable, factorally valid measures of computerphobia.

** Computer anxiety and computer attitudes are related, but not identical.

** Computerphobia correlates:

Measure	Computer Anxiety	Computer Attitudes	Notes
Age	YES	NO	Older: more anxious
Computer Knowledge	NO	YES	Less knowledge: negative attitude
Programming Experience	NO	NO	No relationship
Gender	NO	YES	Women: neg attitude
Academic Major	YES	YES	Soc Sci/Humanities: anxious, neg attitude
Ethnicity	YES	YES	Non-White: neg attit. White: more anxious

Study 2: Computerphobia Correlates/Effects of Computer Experience

Purpose: To further examine the correlates of computerphobia and to observe change in computer anxiety and computer attitudes following extensive computer experience.

Results:

** Pre-post change and partial correlates (removed age, gender, ethnicity, major, class level, computer experience):

Measure	Computer Anxiety	Computer Attitudes	Notes
Pre-Post Change	NO	NO	No overall change
Mathematics Anxiety	YES	NO	More math anxiety: more comp. anx.
State Anxiety	NO	YES	More state anx: negative attitude
Trait Anxiety	NO	YES	More trait anx: negative attitude
Physical Discomfort	YES	YES	More discomfort: anx+neg attitude
Computer Knowledge	NO	YES	Les knowledge: negative attitude
Feminine Identity	YES	NO	More fem identity: more comp anxiety
Masculine Identity	NO	YES	More masc identity: positive attitude
Course Performance	NO	YES	Worse performance: negative attitude

Study 3 and Study 4: Computerphobia and Computer Aptitude, Literacy and Interest

Purpose: To examine the relationship between computerphobia and computer aptitude, literacy and interest in two populations. Study 4 investigated students in computer-related majors (computer science and business information systems) while Study 3 examined students in majors without computer requirements (general students)

Results:

** Partial correlates (removing effects of age and computer experience:

Measure	Computer Anxiety	Computer Attitudes	Notes
Comp Aptitude:			
Gen'l St's	YES	NO	More anxiety:
Computer St's	YES	NO	less aptitude
Comp Literacy:			
Gen'l St's	NO	YES	Neg Att: Less lit
Computer St's	YES	NO	Anxious: Less lit
Comp Interest:			
Gen'l St's	YES	YES	Neg att or anxiety:
Computer St's	YES	YES	less interest
Computer Knowledge:			
Gen'l St's	NO	YES	Neg att: less know.
Computer St's	YES	YES	Neg att or anxiety: less knowledge

** Gender comparisons (covarying computer experience):

General Students:	Women less interested in computers than men.
Computer/Business Students:	Women show less interest and less aptitude than men.

Los Angeles Herald Examiner, Tuesday, December 9, 1986

Classes calculated to combat computerphobia

Fear and anxiety keep many from using new technology

By David Lustig

Just think of all the wonderful things computers can do. They allow us to withdraw money from our bank account at any time of the day or night. They help mechanics tune cars and scientists solve mathematical problems in an instant. Doctors use them to help diagnose patients and children play games with them. Even this story was written and edited on a computer. Computers are a boon to mankind. Unless, of course, you are afraid of them.

Don't laugh. Many people distrust these mechanical marvels, afraid of pressing the wrong button, afraid of being spied on a la Big Brother and afraid of being ridiculed when the computer bleats back that an error has been made.

It is called computerphobia and, depending on the depth of the problem, it can be a mild annoyance as you go through life or a crippling malady that prevents you from being an active participant in society. More than one person has quit a job when informed that learning how to use the newly installed computer was part of the work.

Who is a prime candidate to be a computerphobic?

"It can be almost anybody," explains clinical psychologist Dr. Michelle Weil, clinical director of the Computerphobia Program at Cal State Dominguez Hills.

The worst cases, she explains, manage never even to get around a computer.

"They won't even walk by the computer room on campus if they can avoid it," Weil says. "Their fears may not be reality-based at all, thinking that there are electrodes inside that if they touch the wrong key, they will get a shock, or it can blow up, or worse yet, the computer can take over. It's a lack of knowledge of what computers can actually do to fears about one's own performance around technology. We have found that some people who tend to have computerphobia are also afraid of other forms of technology and try to avoid such things as electric typewriters, microwave ovens and even electric can openers. It can be anything."

Enter Weil and two members of the university's psychology department, Dr. Deborah Sears and Dr. Larry Rosen. As the principal members of the Computerphobia Program, their credo is simple, 'Combat negative thoughts, eliminate self-doubts, reduce anxiety — increase your confidence around computers." It's even printed on their business cards.

Begun in September 1985 after receiving a federal grant, the researchers were surprised at some of their initial findings.

"We went into it believing we would find people who hadn't grown up around computers, such as older people," says Weil, "and we have not found that to be completely true. It can affect almost anyone."

The program is open to all students, faculty and administrators at the university to help them overcome the problem. But even something that seems as beneficial as helping someone overcome a fear of computers can have its detractors.

"One of the biggest battles we had to fight," says Sears about getting the initial grant, 'was that many people said there was no such thing as computerphobia. People who are comfortable with computers have a hard time believing that someone would be *that* afraid of this thing.

"They said it's not really computerphobia, but it is anxious people in general. We have data that shows this is just not true. They said it's test anxiety and that's not true either. Many things you could attribute it to, our research shows it is not."

There are people on campus who don't believe the phobia is real either.

To combat this, another area of the program is designed to raise the awareness level of the faculty and administration that there are indeed uncomfortable students in class, and, with that knowledge, to create a more empathetic attitude toward them.

Sears gives an example of a teacher who had an assignment that required computer work to be completed. The teacher was surprised that as the deadline neared, some students still hadn't started the project and came away with the wrong conclusion that they were just waiting until the last minute to begin.

"He was seeing those students as lazy and irresponsible," she explains, "instead of the idea that it might have something to do with the use of computers. I think he just hadn't thought of it in that light."

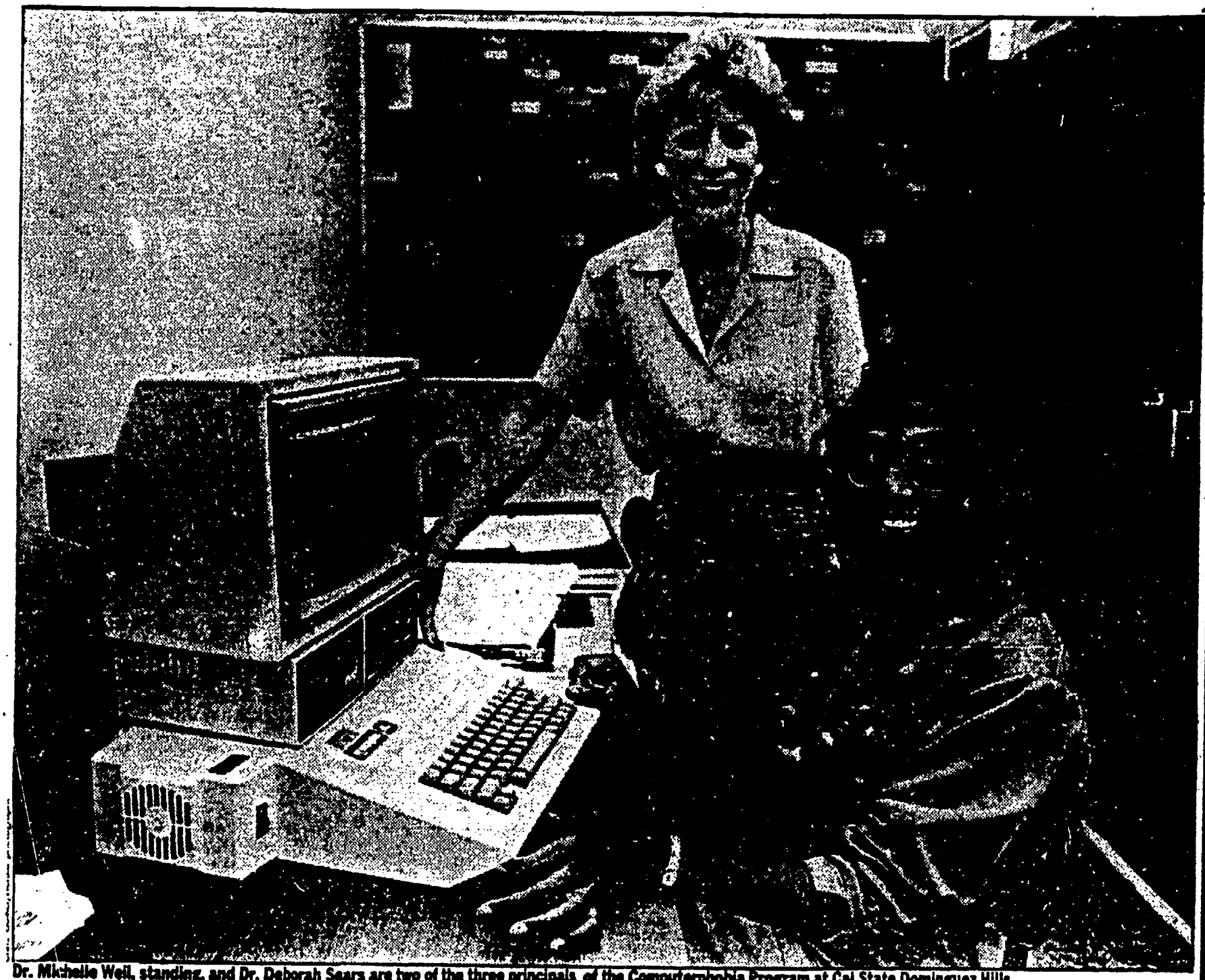
What happens when members of the university take that big step by walking through the front door and admit there may be a problem?

They don't get to play with computers. Instead, an appointment is scheduled to take an assessment test — with old-fashioned paper and pencil — to determine if the person is computerphobic. After analyzing the test data, the person is either informed he or she doesn't have a problem and the program will not be beneficial or is told what degree of discomfort exists and is given a recommendation to join the program. Eighty-five percent of the people diagnosed as having computerphobia do join.

"We're not a class, no one gets college credit for being here and we do not teach how to use computers," says Weil. "We see ourselves as helping those people that cannot even make use of those (computer-learning) classes. When computerphobics go into a computer-learning class, they're so nervous or their attitudes are so negative that the information just doesn't get in. We deal with intervening with their emotional level, then get them back into the direction of the classes they need to get this information."

Depending on the level of the problem, and it can range from mild to extremely severe, the client, as he or she is considered, will either go into an individual treatment program or a group program, sometimes both. Lasting one hour a week for a five-week period, the program is a structured period of time.

"It's not 'Come in and talk about your feeling,' " says Weil. "There's a topic every week that teaches them to more clearly understand the



Dr. Michelle Weil, standing, and Dr. Deborah Sears are two of the three principals of the Computerphobia Program at Cal State Dominguez Hills.

functioning of a computer and helps them identify their fears and fantasies that have kept them away."

In addition to overcoming a fear of computers, many of the 75 people who have completed the program so far have found an unexpected side benefit. According to Rosen, many students say they've become more assertive, not just with computers, but in other situations. And several have learned to apply the anti-anxiety techniques to other problems as well.

Weil has seen similar results. "While we help you with the specific issue of working with computers," she says, "the skills we teach the clientele are ones they can apply to other areas of their life. For example, we teach them to relax specifically around computers. But they take that relaxation skill and apply it elsewhere in their life where they get anxious."

To underscore that point, Weil and Sears point to the impressive success rate of the program.

"We haven't had one person who took the treatments feel that they did not rate themselves as very improved," says Sears, "not only improved in lowered anxiety and improved attitudes, but almost every person has said one of the main things they received from the program is feeling more confident. That's wonderful."

Weil is equally enthused.

"We teach people how to combat their negative attitudes and replace them with much more confidence-building, motivating thoughts. They're applying that skill not just to computer attitudes but to their work in general, as well."

> "While we help you with the specific issue of working with computers, the skills we teach the clientele are ones they can apply to other areas of their life."
>
> **Dr. Michelle Weil**

The staff feels it is a win situation for everyone involved. The interns, who handle the actual treatment, are psychology students at the master's degree level gaining experience toward their licenses, the clients benefit by being able to cope with what was considered before a dreaded enemy and Weil, Sears and Rosen picked up more valuable knowledge about computerphobia.

"I think our program is timely and necessary," says Weil. "My guess is that 15 years from now, we will not be as necessary, but will continue to be around for those people who have still not acquired a technologically positive attitude along the way."

David Lustig, an L.A. writer, contributes regularly to Style Plus.

THE COMPUTERPHOBIA REDUCTION PROGRAM

Michelle M. Weil, Ph.D.

California State University, Dominguez Hills, USA
Chapman College, Orange, CA, USA

COMPUTER ANXIETY: RESEARCH AND APPLICATIONS

Larry D. Rosen, Ph.D.

California State University, Dominguez Hills, USA

Ninth International Conference of The Society For Test Anxiety Research

Padua, Italy, July 7-9, 1988

COMPUTERPHOBIA REDUCTION PROGRAM: Skills Acquisition Modules

Table 1
Sample Hierarchy of Anxiety-Producing Scenes for Systematic Desensitization

Least Anxiety Producing

1. Noticing a newspaper advertisement for a computer.
2. Looking through a college catalog at the computer courses offered.
3. Hearing the beeping noises the computer at home makes when the children are playing.
4. Sitting in a computer class the first day and hearing about the assignments that must be completed.
5. Having a friend help you on a computer assignment.
6. Working in the computer room on a computer assignment that is due in two weeks.
7. Having your children ask you to help them figure out a computer homework problem.
8. Getting an error message while working on a computer assignment and not knowing where the problem lies.
9. Having a class assignment due in one hour and having no one to help you if you can't figure it out.

Most Anxiety Producing

Table 2
Sample Negative Thought/Covert Assertion Pairs

Negative Thought	Covert Assertion
I don't understand this!	I can figure this out!
This is too much to handle!	I enjoy the challenge!
I hope that I have enough time!	Relax, take your time.
Everyone else knows how to do this!	If others have learned this, so can I!
I feel stupid!	This is enjoyable and exciting!
I'm going to make a mistake.	I am an intelligent and capable person.
What if I hit the wrong button?	I know I can do it!

Table 3
Session-by-Session Goals for the Information/Support Group

Session 1: "Myths and Realities About Technology"

Goal: To acquaint clients with one another and the group leader, to begin to establish cohesion and universality, to help clients clarify their ideas about what computers can and cannot do, to help clients gain a more realistic picture about computers and increase their comfort level.

Session 2: "Fears and How to Stop Them"

Goal: To help clients identify the fears that cause discomfort and gain practical experience in dispelling these fears.

Session 3: "Computer Technology in Your Future"

Goal: To help clients clarify what they want from computer technology in their immediate and long-term future; to help them identify what gets in the way and then problem-solve those issues.

Session 4: "Things that Go Bump in the Night"

Goal: To help clients clarify their fears about the "guts" of the computer, learn how different it is from their imaginings, and discover how their fantasies get in their way.

Session 5: "Summary and Closure"

Goal: To summarize what the group sessions have addressed and give clients the opportunity to discuss what they have learned.

Figure 1. Percentage of "Computerphobic" University Students Across Six Studies (N=465)

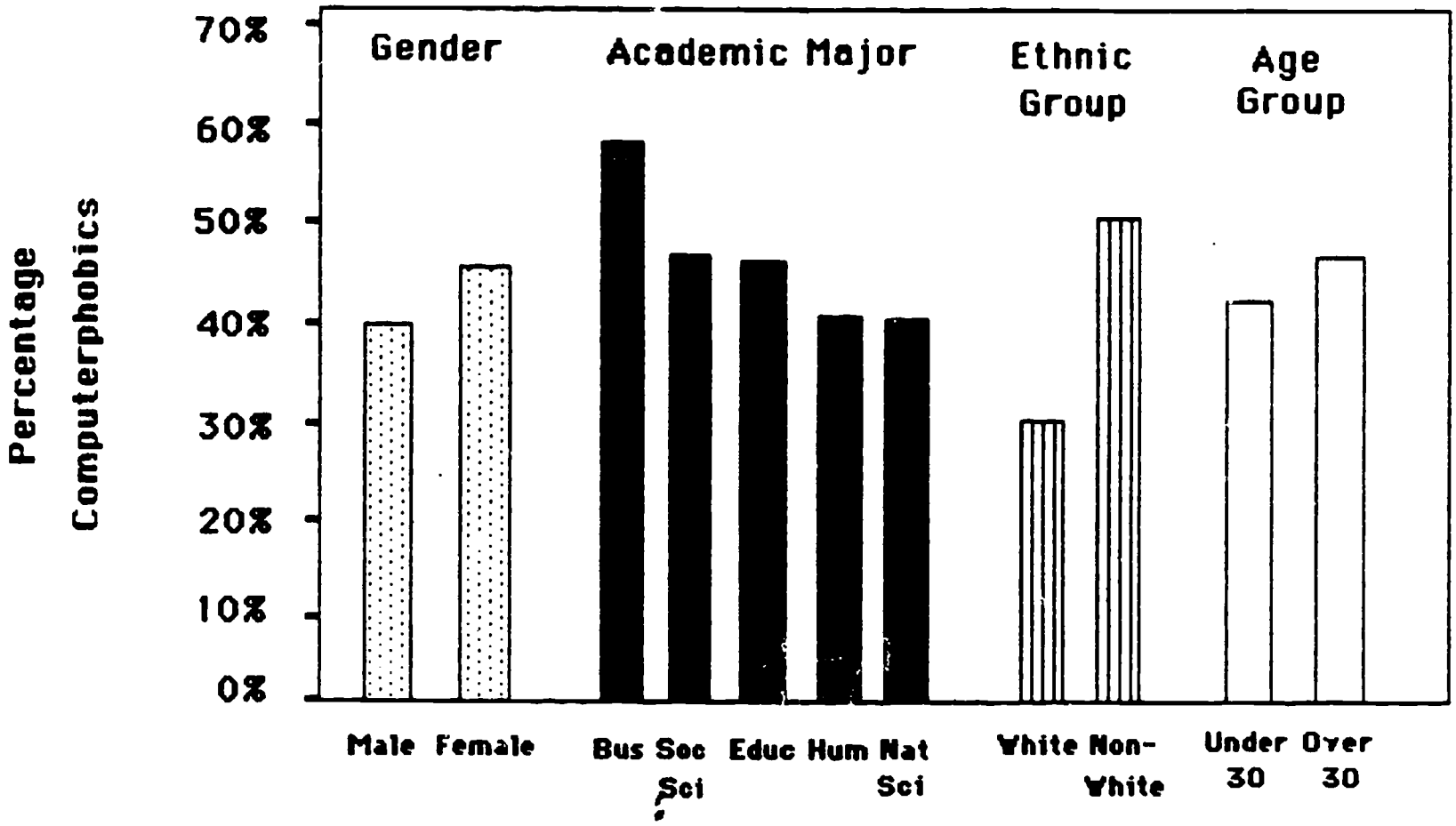


Figure 2. Percentage of "Computerphobic" Students Before and After Treatment Program (N=103) and Comparison Study (N=111)

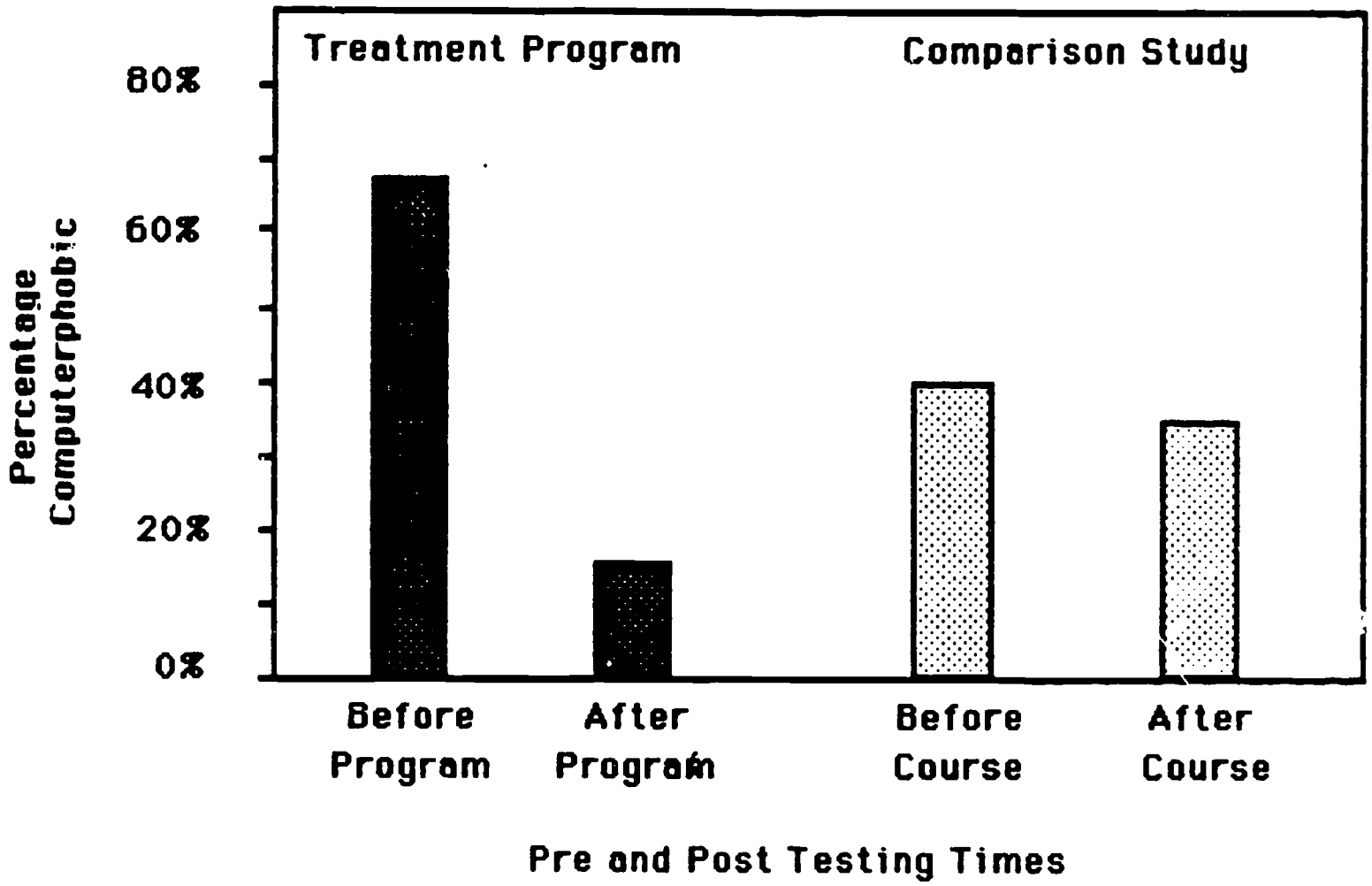
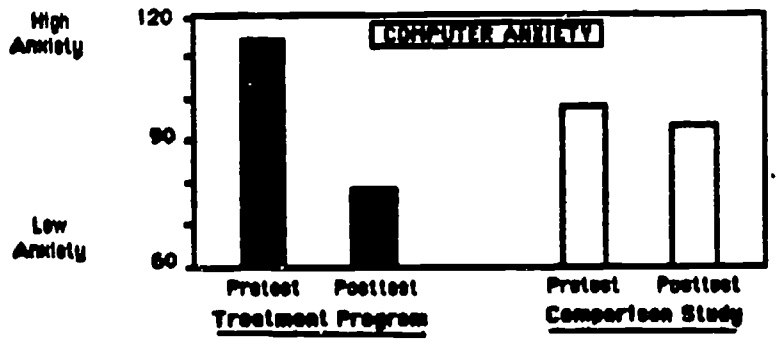
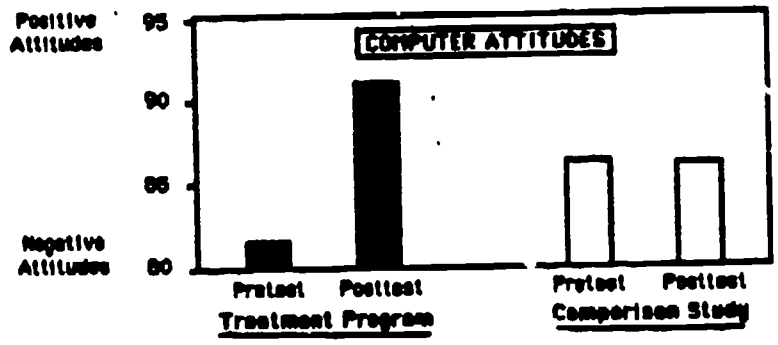
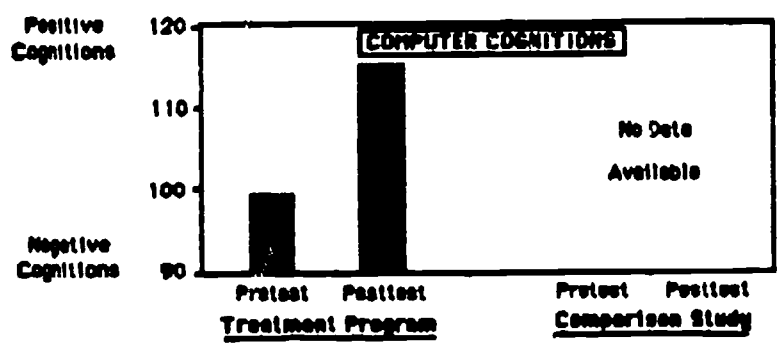
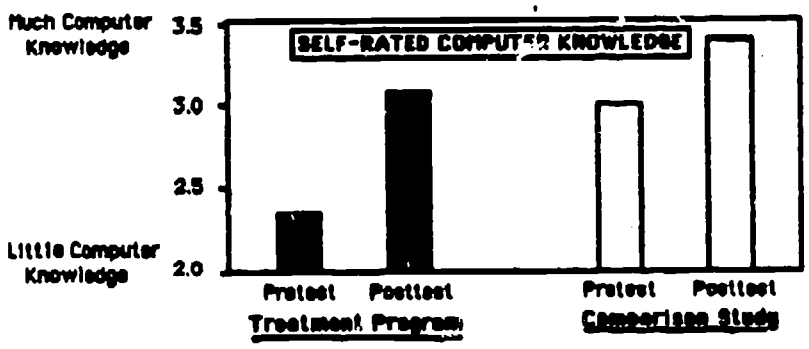


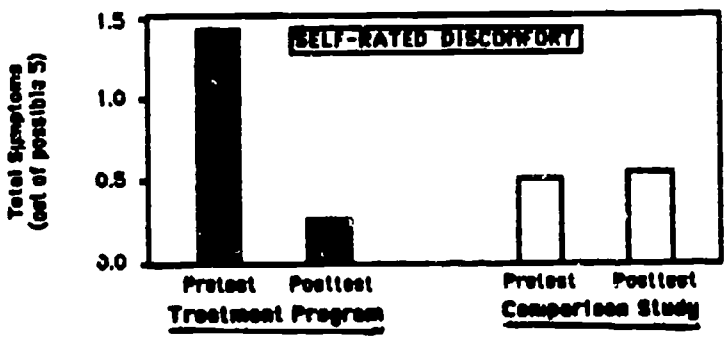
Figure 3. Pretest and Postest Scores For Treatment Program (N=103) and Comparison Study (N=111)











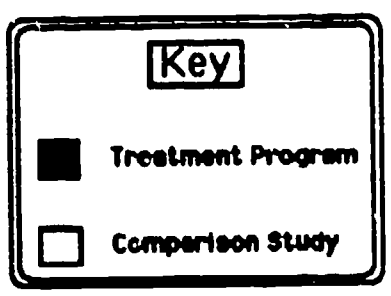
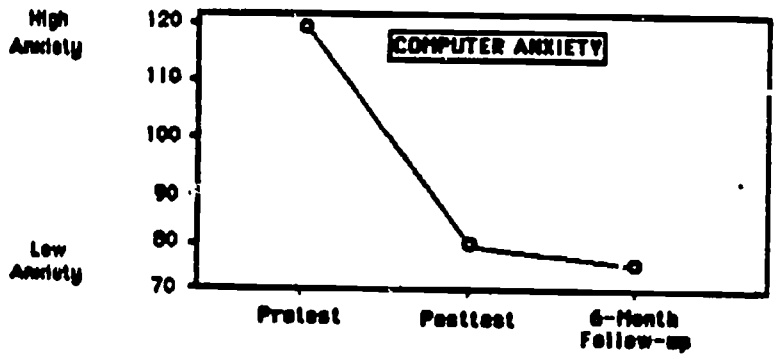
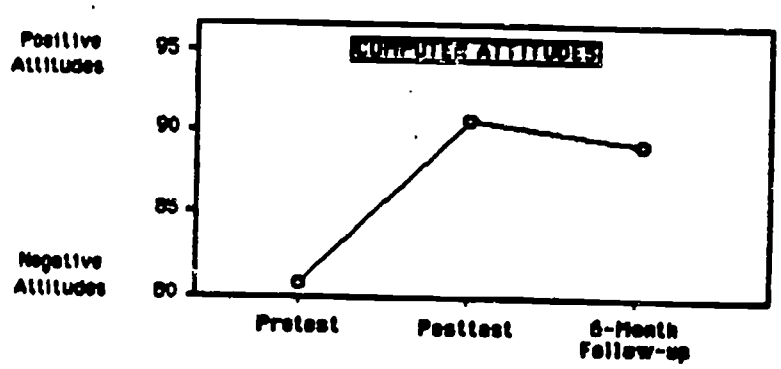
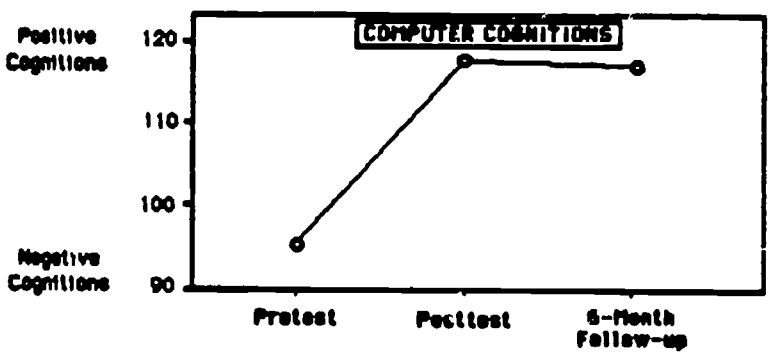
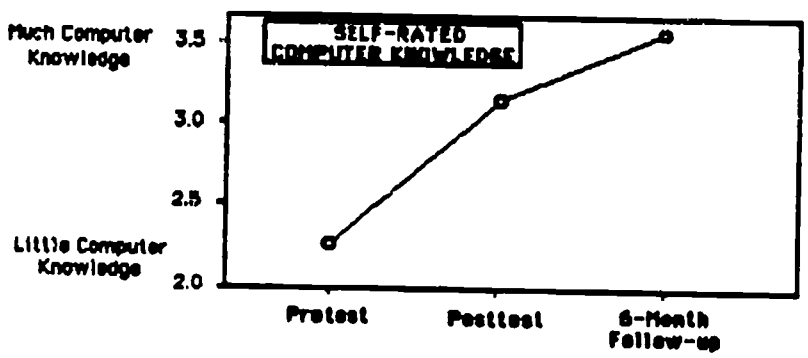


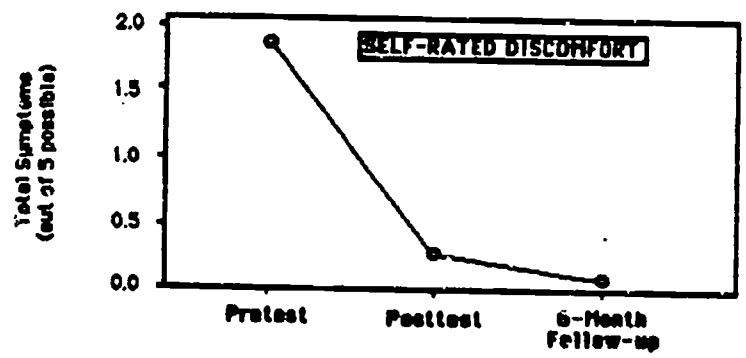
Figure 4. Preliminary Pretest-Posttest-Followup Trends in Computerphobia Treatment Program Results (N=28)











APPENDIX V. Follow-Up Questionnaire

Dear____,

About six months ago, you completed treatment in the Computerphobia Program at California State University Dominguez Hills. At the time you started the program you were informed that you would be contacted at a later date to fill-out some post-treatment assessment instruments, and talk with an evaluator about the effects of the treatment.

As Evaluation Director of the program, I am asking you to assist us by taking a few minutes right now to fill-out the enclosed questionnaire. Please return the completed questionnaire promptly in the enclosed envelope. Your responses will help us determine if the program helped you and others like you. We will also be able to make any changes that may be necessary.

I would also like to speak with you by phone to collect additional information and impressions you may have. Please indicate on the questionnaire the best time to contact you by phone.

Thank you in advance for your cooperation and valuable assistance, and please remember to return the questionnaire promptly.

Sincerely,

Deborah C. Sears, Ph.D.
Evaluation Director

Do Not Write in this space

CP ID#_____

SIX-MONTH FOLLOW-UP QUESTIONNAIRE

Student ID#_____

How would you rate your <u>current</u> knowledge of computers?

____ Much Lower Than Average Knowledge
____ Below Average Knowledge
____ Average Knowledge
____ Above Average Knowledge
____ Much Higher Than Average Knowledge

How would you rate your <u>current</u> attitude about computers?

____ Very Negative
____ Negative
____ Neutral
____ Positive
____ Very Positive

How would you rate your <u>current</u> level of anxiety about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

How would you rate your <u>current</u> level of confidence about using computers?

____ Very Low
____ Low
____ Moderate
____ High
____ Very High

Which of the following <u>currently</u> happen to you when you use a computer or think about using a computer? (Please check all that apply)

____ Sweaty palms
____ Queasy stomach
____ Restlessness
____ Heart racer
____ Mind goes blank or wanders
____ Shortness of breath
____ Light headedness
____ Other (Please Describe:_____
_____)

____None of the above happens to me

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

Which of the following thoughts do you currently have when you use a computer or think about using a computer? (Please check all that apply)

____ Computers are cold and impersonal
____ I feel stupid
____ This will be fun
____ I'll never be able to do this
____ I'm excited
____ I'm scared that I'll make a mistake and won't be able to fix it
____ I feel overwhelmed
____ I know I can do it
____ How can I get out of this?
____ I am willing to give it a try
____ I can get help if I get stuck
____ Everyone else knows what they're doing
____ This is really interesting
____ I am totally confused
____ Others have learned this and so can I
____ Other (please describe:_____

_____)

IN THE LAST SIX MONTHS how many times have you used computers in the following ways?

Automatic teller machine	___Never	___1-2 times	___3-5 times	___6+
Word processing	___Never	___1-2 times	___3-5 times	___6+
Class requirement	___Never	___1-2 times	___3-5 times	___6+
Homework assignment	___Never	___1-2 times	___3-5 times	___6+
Learn programming language	___Never	___1-2 times	___3-5 times	___6+
In your job	___Never	___1-2 times	___3-5 times	___6+
In the library to locate books or journals	___Never	___1-2 times	___3-5 times	___6+
Play video arcade games	___Never	___1-2 times	___3-5 times	___6+
Play computer games	___Never	___1-2 times	___3-5 times	___6+

Are you currently enrolled in classes at CSUDH? ____yes ___no

If not, why not? ____graduated
____not enrolled, no plans to return
____not enrolled now, but plan to return
____ other (please specify)_____

IN THE LAST SIX MONTHS, have you enrolled in any courses at

CSUDH or elsewhere which use computers? ____yes ____no

If yes, how many at CSUDH? _____

How many elsewhere? _____

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

Which of the following computer-related activities have you participated in during the last six months or plan to participate in the future? Please check all that apply.

	LAST SIX MONTHS	FUTURE
Programming language class.....	____	____
Word processing class.....	____	____
Computer art class.....	____	____
Computer music class.....	____	____
Homework assignments using computer....	____	____
Exams given using computer.....	____	____
Study aids on computer.....	____	____
Classes instructed via computer.....	____	____
PLATO self-teaching computer.....	____	____
CSUDH computer terminal.....	____	____
Other computer terminal.....	____	____
CSUDH Apple Lab.....	____	____
CSUDH Commodore Lab.....	____	____
CSUDH Library terminal.....	____	____
CSUDH Leading Edge Lab.....	____	____
SIGI Career Guidance System.....	____	____
Learning Assistance Center.....	____	____

Do you own a home computer?

____No. I plan to buy one ___never
___in the next 6 months
___in the next 12 months
___in the next 5 years

____Yes. Month/Year purchased? ____/____

I use my home computer:

____much more now than before the program.
____more now than before the program.
____same as before the program.
____less than before the program.
____much less than before the program.

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

In the last six months, have you used a personal computer in any ways you had not used one before? (Please check all that apply)

____ word processing
____ home accounting
____ computer filing system
____ creating data bases
____ computer games
____ skill development (e.g., learning to type)
____ used a modem
____ electronic bulletin board
____ other (please describe:_____)

In the last six months, have you had a job?

____ no

____ yes

Have you used computers in your job for the first time? ____ yes ____ no

Have you used computers in your job in any new ways? ____ yes ____ no

Which of the following best summarizes your career aspirations at this time?

____ I would definitely consider a career that involves computer use in some way.
____ I would consider a career that involves computer use in some way.
____ I would be reluctant to pursue a career that involves computer use.
____ I would definitely avoid a career that involves computer use.
____ Computer use would not be a factor in selecting a career.

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

Please check the skills you learned in the Computerphobia Program.

____ How to be more relaxed in general
____ How to stop negative thoughts
____ How to replace negative thoughts with positive motivating ones
____ How to relax in anxious situations

How helpful are those skills you checked above in dealing with computers?

	extremely helpful	moderately helpful	slightly helpful	not at all helpful
How to be more relaxed in general.....	____	____	____	____
How to stop negative thoughts.....	____	____	____	____
How to replace negative thoughts with positive motivating ones.....	____	____	____	____
How to relax in anxious situations.....	____	____	____	____

How would you rate the overall effectiveness of the program in decreasing your ANXIETY about computers?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

How would you rate the overall effectiveness of the program in decreasing your negative ATTITUDES about computers?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

How would you rate the overall effectiveness of the program in increasing your USE of computers?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

Please answer the next four questions only if you were in an Information/Support Group

How would you rate the overall effectiveness of the group sessions in teaching you how to reduce your fears about computers?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

How would you rate the overall effectiveness of the group sessions in clarifying your thoughts about what computers can and can't do?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

How would you rate the overall effectiveness of the group sessions in helping you set goals for computer use in your future?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

How would you rate the overall effectiveness of the group sessions in increasing your comfort around computers?

____ very effective
____ effective
____ neither effective nor ineffective
____ ineffective
____ very ineffective

SIX MONTH FOLLOW-UP QUESTIONNAIRE (continued)

Please describe your feelings about making your personalized graduation certificate. (please check all that apply)

____ fun
____ made me uncomfortable
____ rewarding
____ of no real value
____ made me want to use computers more
____ other (please specify:_____

_____

How would you rate the skill of the person who worked with you in individual treatment sessions?

____ very skilled
____ skilled
____ can't tell
____ unskilled
____ very unskilled

____ I was not in individual sessions

How would you rate the skill of the person who worked with you in the Information/Support groups?

____ very skilled
____ skilled
____ can't tell
____ unskilled
____ very unskilled

____ I was not in an Information/Support Group

We thank you very much for completing this questionnaire. Your feelings and impressions will provide valuable information for our future direction.

The Evaluation Director would like to contact you by phone to further discuss your impressions of the Computerphobia Program. Please indicate the best days and times for her to contact you:

Day(s):_____

Time(s):_____

THANK YOU AGAIN FOR YOUR HELP!

APPENDIX W. Follow-up Questionnaire Reminder Letter